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## PART I.—ESSAYS, MONOGRAPHS, AND CASES.

*Foreign Bodies in the Respiratory Passages.* A few cases, illustrating the length of time that foreign bodies may remain in the trachea and bronchus without causing fatal lesions. By E. H. DAVIS, M. D., Professor of Materia Medica and Therapeutics in the New York Medical College.

M. JOBERT de Lamballe read a paper some time since, before the French Academy of Sciences, in which he submitted many valuable conclusions upon this subject, in most of which, I think, the experience of the profession will bear him out; yet, I cannot wholly subscribe to the 20th inference, which is as follows:—

“That the operation of tracheotomy is indispensable in almost every case of the introduction of a foreign body into the air-passages, and that it is only in exceptional cases that the operation can be dispensed with.”

From my own limited experience, as well as facts drawn from the medical literature of the past twenty years, I am satisfied that many cases have been, and may be relieved without an operation—simply by adopting the valuable suggestions of M. Brunel, the engineer, in his celebrated case. Although Sir B. Brodie (who reports the case) deemed it best in this instance to operate, yet the plan has proved successful in the hands of Duncan, and Simpson, of Edinburgh, as well as in some instances in this country.

I will relate a few cases which have occurred in my own practice, and then cite some from other sources, to illustrate this position.

*Case I.* A son of James Hughes, Esq., of Ohio, aged about ten months, was playing on the carpet with some citron-melon seeds. Putting them

into his mouth, he accidentally drew, as was supposed, *one* of the seeds into the trachea.

I found him, twenty hours after the accident, with paroxysms of suffocation recurring at short intervals. During the fits of coughing, I could distinctly hear the foreign body move in the trachea.

I determined to perform tracheotomy, and remove the foreign body, if possible.

On opening the trachea, a fit of coughing ensued, when out flew a melon seed through the incision. The child being then quite easy, I dressed the wound, and left him in the hands of the family physician.

Some days subsequently I received a letter, stating that paroxysms of dyspnoea (somewhat similar to those occurring before the operation) had returned, and which could not be accounted for by the attendants. Supposing them to be occasioned by an accumulation of mucus, I merely gave some simple directions with regard to the position of the patient, and advised expectorants. But the paroxysms continued to occur daily for a period of ten days, when finally the child coughed up a *second* melon seed. All unpleasant symptoms then ceased, and the patient recovered rapidly.

*Case II.* In the summer of 1846, a boy, eight years old, was playing on the tongue of a wagon with a broken nail in his mouth. In falling over the pole, he drew the nail into his trachea.

Various physicians in the neighborhood were consulted, who were sufficiently convinced of the presence of a foreign body to recommend an operation. Accordingly, on the third day after the accident, he was brought to me for that purpose. I found him laboring under some difficulty of respiration, especially in the right lung. But as the stethoscope revealed nothing, and the symptoms were not urgent, I dismissed the patient, with directions to assume an inverted position during the paroxysms of coughing, in hopes the foreign body would be spontaneously dislodged.

Ten days afterward, he returned with the symptoms so much aggravated that, after consultation with some medical friends, I determined to operate. As the substance was iron, and, from all the symptoms, had settled down into the right bronchus, we procured a pair of forceps, with long and delicate blades, especially for the occasion.

After opening the trachea in the usual way, I made several explorations in hopes of finding the foreign body, but without success. The irritation was so great on introducing the forceps, that we desisted from further attempts until the following day, when we were still unsuccessful. The wound was then lightly dressed, and the patient sent home, with the following directions:—That, during each paroxysm of coughing, he should incline

his body forward, with his head downward, and be struck with violence between the shoulders.

On the ninth day after the operation (and whilst in the position recommended), the patient coughed up the head of a tenpenny nail, with about three-quarters of an inch of the body attached. It was firmly inclosed in a globe of mucus. He then rapidly recovered, and has remained well for years.

*Case III.* J. W., 16 years of age, clerk in a store, consulted me about six years since—stated that he was in the habit of chewing coffee grains and that two months previously, whilst laughing, he thought he had drawn a grain into his trachea. He was annoyed by violent paroxysms of coughing, pain in the right side of his chest, with some dulness on percussion, but not attended with much expectoration.

Not deeming the symptoms sufficiently grave to demand an operation, I simply advised the patient to assume the position, during the paroxysms, recommended above. Four weeks after, during a fit of coughing, half a grain of coffee, involved in mucus, was ejected, when the young man speedily recovered.

*Case IV.* Miss B. suffered for one year with all the symptoms, apparently, of pulmonary consumption. Finally, after being confined for weeks to her bed, and hourly expecting dissolution, she coughed up a splinter of beef bone. She then recalled the circumstance of being choked by a piece of bone, whilst taking soup at dinner—from which date her ill health had commenced. After being relieved of the foreign body, she gradually regained her usual health, which has continued for years.

I will now condense a few cases, showing not only the length of time foreign bodies may remain in the trachea, but also that very distinguished surgeons have frequently failed to find the offending substance, even after an operation.

A case is reported in the *Journal Hebdomadaire*, of a man who presented himself at the Beaujon in Paris, in June, 1829. In using a needle about his nostrils, he allowed it to slip backwards into the windpipe. Various unsuccessful attempts were made to remove the needle. On the sixth day after the accident, M. Blandin performed tracheotomy, but did not succeed in finding the needle. Thinking it possible that in a fit of coughing it might be expelled, he merely covered the wound with a piece of linen, perforated with holes, and spread with cerate. The result realized his expectation; for, on the following day, the needle, much corroded, was found adhering to the compress.

Dr. Wells, of Columbia, S. C., reports the case of a child, four years old, who, in Sept. 1833, suffered a melon seed to pass into the trachea. The patient was brought to Dr. W. six days after the accident occurred. He found that breathing had become permanently difficult and croupy, attended by other unpleasant symptoms. He performed tracheotomy at once. When the air rushed from the opening, the seed, with some bloody mucus, was ejected.

Dr. Drake communicates a case of laryngotomy performed, the same year, by Dr. McCulloch. The subject was a child, two years of age, who, in playing with a grain of corn, allowed it to pass into the trachea. Laryngotomy was performed on the second day, but without success. The child lived six days after the operation. After death, the grain of corn was found in the trachea, imbedded in mucus.

One of the most remarkable and interesting cases on record is that (so often quoted) of Mr. Brunel, engineer of the Thames Tunnel. He was attended by some of the most distinguished surgeons of London. The following abstract is from Sir Benj. Brodie's report.

On the 3d of April, 1843, Mr. B., whilst amusing some children, allowed a half-sovereign to slip into his trachea. Severe fits of coughing succeeded, together with some pain in the right side of the chest. No unusual sounds were detected by the stethoscope. The patient was able to pursue his usual occupation, and made two journeys.

On the 19th of the same month, he the second time tried the experiment of placing himself in the prone position, with the sternum resting on a chair, and his head and neck much inclined downwards. While in this position, he distinctly felt a loose body slip forward along the trachea.

An apparatus was then constructed, with a hinge in the centre, so that one end being elevated, the other was equally depressed. On the 25th of April, Mr. B. was laid on this platform with his shoulders and body confined by a belt. His head was then lowered at nearly an angle of 90 degrees, his back was forcibly struck several times with the hand, which produced such violent fits of choking, that it was thought prudent to desist for the time.

On the 27th, tracheotomy was performed, with a two-fold object in view:—1st. That an attempt might be made with the forceps to extricate the foreign body; or 2dly, if that failed, the opening might serve as a safety-valve in repeating the experiment of inverting the body. All attempts to remove the coin with the forceps were unsuccessful, as each introduction of the instrument induced such violent paroxysms. Further trials were postponed until the 2d of May, which were followed by like results.

On the 13th (the wound being kept unclosed), the patient was placed on the platform as before described, and struck on the back. He soon felt

the coin quit the chest, striking almost immediately the incisor teeth, and dropping from the mouth.

From this date, the patient got rapidly well.

Dr. Thornton, of Henderson, Ky., communicates the case of a child twenty-one months old who had drawn a bean into the larynx, where it had remained some weeks before he operated. After extending the incision as far as possible, he yet found it impossible to dilate the blades of the forceps sufficiently to seize the bean—so was compelled to force it with a bullet-pointed probe through the rima glottidis.

A boy, thirteen years old, got a pebble into his trachea, and was sent to Guy's Hospital. At first, as he showed so little uneasiness, mere quiet was prescribed—the patient being closely watched. A day or two afterwards respiration was nearly stopped in the left lung, and when the patient coughed, the movement of a foreign body was heard. The operation of tracheotomy was resolved on, and performed by Mr. Bransby Cooper. The boy was inverted and struck forcibly on the back, when the pebble escaped through the wound. (We do not learn from the report that this course was attempted previous to the operation.)

A girl, seven years old, with a sheep's tooth in the bronchus, was admitted into the Stockport Infirmary nine days after the accident. Tracheotomy was performed. Soon after a fit of coughing ensued, which forcibly expelled the tooth through the wound.

Dr. J. Mason Warren recounts three interesting cases of foreign bodies in the air-passages, two of which will be adverted to hereafter.

The first is that of a little girl, eight years old, into whose trachea a garden-bean entered whilst she was laughing. Tracheotomy was deferred, in hopes the body would be spontaneously discharged; but, after two days, symptoms of suffocation were manifested. The operation was then performed, and the bean, much swollen, removed with great difficulty.

Many other cases might be recounted of operations by distinguished surgeons; but these are sufficient for my purpose.

I next select a few cases where the foreign body has been ejected from the trachea spontaneously, or aided by the plan already alluded to.

M. Malsh-Tagarnaud reported to the Academy of Medicine in Paris an interesting case. The subject of it, a woman fifty-eight years of age, had been laboring under a cough for four months, for which she could assign no cause, nor was any thing learned by auscultation. The cough recurred every eight or ten days, lasted one or two minutes, and was unaccompanied by fever or expectoration. The symptoms continued without change for five months longer, until finally, in a fit of coughing, she expelled a cherry-stone, encrusted with calcareous matter to the size of a filbert. She then remembered that the first attack occurred when she was eating cherries.

A similar instance of a cherry-stone encrusted with tartar, expelled in a fit of coughing, after being retained in the air-passages a year, is related in the *Ephem. Nat. Cur.*, 1842.

Dr. Duncan, Surgeon to the Royal Infirmary, Edinburgh, relates a case of an accident which occurred to a man who was amusing himself by tossing up a shilling and catching it in his mouth, when it slipped into the larynx. Violent coughing with great dyspnoea ensued, but after a time subsided. From the favorable result of Sir Benj. Brodie's case, it was resolved to try inversion of the body. However, instruments were kept in readiness, in case the shilling should change its position so as to produce suffocation. Three strong men seizing the patient by the loins and thighs, inverted him suddenly, Dr. Simpson at the same time moving the larynx rapidly from side to side. The result was entirely successful, the piece of money soon passing into the mouth, and out upon the floor.

Dr. Duncan has collected numerous cases of the spontaneous expulsion of foreign bodies from the air passages, from which we abstract some of the most interesting.

Mr. R., æt. 42, in February, 1841, whilst at dinner, let a piece of bone slip into the trachea. A troublesome cough, and other pulmonary symptoms ensued. Four years afterward, the unpleasant consequences having increased, he went to Edinburgh for consultation. On the second of March, 1845, he was seized with a violent fit of coughing, and a small piece of bone was discharged. The paroxysms still continued, and in half an hour a still larger piece was ejected. From this time the symptoms improved. He began to rest well at night; and, although the cough and expectoration continued troublesome for a time, he was perfectly recovered in June.

This case is remarkable from the length of time the foreign body remained in the air-passages, and the complete recovery which followed its ejection.

Another case is that of a boy, who had drawn a piece of wood into the trachea, which at first lodged in the right bronchus. At the end of four weeks the foreign body was thrown up from the bronchus into the trachea. As there appeared no particular danger, Mr. Plant (surgeon of the Dublin Hospital), trusting that as it had been thrown from its first situation it might be also dislodged from the trachea, deferred operating. At the end of the fifth week this did happily occur, and the boy rapidly recovered.

Still another, of a girl, who, in eating soup, allowed a piece of bone to slip into the trachea. Hæmoptysis, with purulent expectoration, followed. But, at the end of four months, the bone was coughed up, and the girl recovered.

A case occurred in which a nail passed into the trachea of a man sixty-five years old. Severe pulmonary symptoms ensued, and the life of the pa-

tient was despaired of by the faculty. But in three months after the occurrence the nail was coughed up, and the man recovered—was alive twelve years afterward, though subject to frequent pulmonary affections.

In a case related by Dr. Lettson, the covering of a button remained in the air-passages for eight months, when it was coughed up and the pulmonary symptoms subsided.

The admission of an ear of grass into the air-passages is not an unfrequent accident, and always occasions distressing symptoms. Dr. Donaldson, of Ayr, relates a case of this description, where the grass remained in the right bronchus for seven weeks, giving rise to intense bronchitis. It was then expectorated, and the patient recovered.

Dr. Pitcairn relates one more remarkable, from the length of time (twenty-two months) the grass remained in the air-passages, and the obscurity of the case, as the patient did not mention the accident. He was a child between five and six years of age, and was recovering from an attack of pertussis when the head of grass was drawn into the trachea. He was seized with an attack of acute bronchitis, which, when subdued, was followed by chronic symptoms. When much emaciated, he was relieved finally during a fit of coughing, when the ear of grass, enveloped in thick, fetid, and bloody pus, was ejected. The boy then remembered the occurrence.

My colleague, Prof. Barker, mentioned to me a case, which occurred in his practice, of a child who drew a head of herds-grass into the trachea, where it remained for some months and was ultimately expectorated.

Dr. Warren reports the case of a young woman, who had a pin lodged in the larynx. Attempts were made to remove it by the finger, and she was bled. While awaiting a renewal of the attempts, the pin was spontaneously dislodged, entered the throat, and was swallowed.

Another, equally remarkable, was that of a boy who swallowed a horse-shoe nail. For several days he suffered much from occasional suffocative symptoms, apparently produced by the nail mounting up from the bronchus to the trachea. Dr. W. had determined to operate, when a violent cough, accompanied with the discharge of much stringy mucus, occurred, after which all symptoms of the presence of a foreign body disappeared. It had probably entered the fauces, and been swallowed.

We might go on citing instances enough to fill a volume, if our limits would permit; yet we deem this sufficient, as we may hereafter resume the subject.

In reflecting upon the above cases, as well as experiments upon the cadaver, we feel justified in arriving at the following conclusions:

1st. That foreign bodies are most likely to lodge in the right lung, favored by the dimensions and direction of the right bronchus.

2d. They enter the trachea at the moment the glottis and vocal chords

are most relaxed, as during the forced inspiration of laughter, or in the act of sipping liquids.

3d. That most bodies may remain some length of time in the trachea, without producing serious consequences.

4th. That tracheotomy should not be performed until all available means have been used and persevered in to favor the expulsion of the foreign body—such as inverting the body, and striking the back with force, during the paroxysms of coughing.

5th. That where there is immediate danger of suffocation, or where the body is very sharp, angular, or rough, as in many cases reported, then an immediate operation is demanded.

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*Remarks on the Pathology of Infantile Laryngo-tracheitis, or Croup, as the basis of its rational treatment.* By E. R. PEASLEE, A. M., M. D., Professor of Anatomy, &c.

ALTHOUGH the readers of the MONTHLY have so recently perused the able article on Croup, by Dr. Horace Green,\* the great practical importance of this subject affords a sufficient apology for again so soon calling their attention to it. Moreover, the writer of the present article desires, while Dr. G.'s views are fresh in recollection, to express his own convictions, both from experience and observation, of their correctness, so far as the mischievous consequences of the violent treatment usually resorted to are concerned; while he at the same time proposes certain ideas he has for some time held of the pathology of this disease, and thus attempts to lay a foundation for its rational treatment.

The sanguinary and heroic means generally resorted to in the treatment of croup, would seem to show that it is regarded as essentially different from all other infantile diseases; and hence, the caution and regard for the delicacy of the little patient, which should characterize all medication at this period of life, has apparently been regarded as here out of place. At least, the disease has been too generally treated with an energy—a *desperation* even—which no other opinion can justify.

It is believed, however, that croup may be shown not to be wanting in analogies with other diseased conditions, both in the infant and the adult; and that some salutary, practical inferences will flow from a knowledge of the relations here to be pointed out.

\* See the June No., p. 409-421.

Two varieties of croup are admitted by all writers—the *spasmodic* and the *inflammatory*.

The *spasmodic croup*—otherwise called *false* or *spurious* croup—is merely a *laryngismus*; in other words, it is merely a spasmodic condition (a spasm) of the muscles of the larynx. It is very unfortunate that the word “croup” has ever been applied to this affection, it having but a single symptom in common with genuine croup, viz., the peculiar stridulous sound accompanying inspiration. This should hereafter be termed *laryngismus*, merely, and not croup; and by that term it will be designated in this paper.

The *inflammatory* variety of this disease (with which some degree of laryngismus is always associated), is called *true* croup, and sometimes membranous croup; and more recently has been termed “pseudo-membranous laryngitis.”\* The last name implies two distinct propositions: 1st. That croup is a laryngitis, i. e. an inflammation of the mucous membrane of the larynx; 2d. That this inflammation is accompanied by the formation of a false membrane.

Here, then, are the two essential pathological elements of this disease, and without the co-existence of which, croup does not exist.† But, assuming these propositions, in order to have a definite point of departure, in discussing a subject so differently understood by different writers,—several questions at once suggest themselves.

Does laryngitis occur also in children, as in adults, *without* false membrane? And, if so, shall it not also be termed croup? On the other hand, does laryngitis *with* false membrane occur in adults? And is it *not* here true croup also? Is the actual pseudo-membranous laryngitis of infants and children a *specific* inflammation? And, in this form of disease, does the danger to the patient result mainly from the presence of the false membrane, as seems to be so very generally admitted? or is the inflammation alone often sufficient to produce fatal results?

These, and other inquiries suggested by these, will be answered as we proceed. They have all been variously answered by different writers; and hence we deem it necessary to examine them anew.

1st. Does laryngitis, without false membrane, occur in the infant as in the adult?

We may very summarily dispose of this question, by reminding ourselves that several writers admit a *catarrhal* variety of croup, in which it is con-

\* Some make croup to be a *tracheitis*, instead of a laryngitis. It will be seen; however, that both these portions of the air-passages are, almost uniformly, and even the bronchi also are, not infrequently, affected in succession, or at the same time, in this disease.

† M. Bouchut says, “Sans ce produit [fausse membrane] il n’y a pas de croup.” Guerrent and Bretonneau hold the same idea.—*Dr. H. Green on Croup*, p. 5-7.

fessed that no false membrane is formed. But a mere *catarrh* is an increased secretion from a mucous membrane, from congestion or irritation, or both, and is no evidence of inflammation at all. True membranous croup is often preceded by a mere catarrh of the larynx and trachea; and a catarrh often stops short of true croup. But to term a mere catarrh of the upper part of the air-passages in a child *croup*, while we at the same time admit its inflammatory character, is as objectionable as to term an increased secretion of the Schneiderian membrane (as from the irritation of snuff) an inflammation of this part. And the absurdity of this idea is still further shown, if we decline to term a similar catarrh "*croup*," when it occurs in the adult; and moreover, hold, with some, that this same catarrh is, in the child, the result of a peculiar—a *specific* inflammation.

If there be an actual inflammation, there will in all cases be something different upon the membrane from a mere catarrh. This will be explained further on; and, meantime, we shall object to the term *croup* being applied to any morbid state in which inflammation is not an element.

Now, regarding *croup* as always an inflammation, all well know that in fatal cases of true *croup*, so called, the development of the membrane is not always completed before death ensues. But all analogy favors the presumption that a laryngitis may run through its course and terminate favorably in the infant as well as in the adult, without necessitating the formation of a false membrane in any degree. Inflammations of even the serous membranes are not uniformly productive of false membranes, in either infants or adults; indeed, they are so only in a minority of all the cases. Highly improbable is it, therefore, that inflammation of the mucous membrane of the infant's larynx should always produce a false membrane.

And does it alter the case, if we admit, with some, that *croup* is a specific inflammation? Not at all, as we shall see when we come to explain the manner in which a false membrane is invariably produced.

Or we are, perhaps, assured that *croup* is an inflammation mainly of the mucous follicles of the larynx and trachea, and therefore the false membrane is developed. We cannot conceive how, in any case of laryngitis, these follicles can possibly escape the inflammatory process, if we consider either their number or their position. But how they are more likely to be especially attacked in the infant than in the adult, or, if so, why they are in the former more likely to lead to the formation of a false membrane, none of the received principles or analogies of pathology can explain.

Are we told that these follicles when inflamed secrete an albuminous fluid, and this becomes converted into the false membrane? I reply, that the *secretion* (incorrectly so called) is *not* "albuminous," though generally so represented; and that a false membrane, moreover, is never developed from a secretion.

But if the false membrane extends into the trachea, it is found to be thickest on the posterior wall, where the follicles are most abundant. Precisely so; and the true explanation of this fact will be given further on.

Others, still, assert that the false membrane is produced from the fact, that the submucous areolar tissue is inflamed in membranous croup. This, however, is an entirely gratuitous assertion.\*

The presumption is, therefore, in favor of a laryngitis not leading to the formation of a false membrane, in the infant as well as in the adult.

And what facts can be found to bear on this question? Do we not meet with cases of supposed membranous croup, in which recovery takes place without the existence of a false membrane having been *demonstrated* at all during the progress of the case? And in how many cases in which the membrane is said to have been coughed up, or vomited up in a "dissolved state," or in the form of "flakes," is it certain that the supposed false membrane was actually such? It is very true that children, up to nearly or quite seven years of age, usually *swallow* whatever they force up through the larynx by the act of coughing. But it is also true, that various substances ejected from the stomach of a healthy child, even, might sometimes be found precisely to resemble these "shreds" of false membrane, so called, which sometimes appear in the circumstances under consideration.

We do not, therefore, by any means deny that shreds of false membrane are often ejected from the stomach during the continuance of true croup: but we do insist that very often they could not be demonstrated to be such, especially if they had remained for a short time in that viscus; and, moreover, that very frequently they would not have been pronounced such on examination even, were they not expected, in such a case, as a matter of course. We accept, therefore, such observations, except when the fragments are distinctly tubular, or of considerable dimensions, with a degree of philosophical doubt; just as we listen to accounts of worms appearing in the alvine evacuations, "cut up" and "dissolved," after giving a vermifuge on the suspicion that they are present in the alimentary canal—though no other previous or subsequent proof of their existence can be adduced.

On the other hand, not infrequently does it occur that in autopsies of fatal cases of what was diagnosticated and treated as true croup, no false membrane at all is found. Had it here become detached, and been expectorated before death? There has been no proof of this whatever.

Such facts, we think, render it extremely probable that in many cases,

\* The writer by no means denies that inflammation of the submucous areolar tissue of the larynx ever exists. On the contrary, "submucous laryngitis" is a well-known disease, and œdema glottidis is a frequent result of it. But croup is another disease, according to all writers, and is here regarded as mere laryngo-tracheitis.

not distinguishable for any practical purpose from true croup, during life, a *false membrane is not formed at all*; and that, therefore, laryngitis without the formation of a false membrane occurs in the infant as well as in the adult.

But this point will be still further elucidated, when we have next considered the source from which false membranes are in all cases derived, and the manner in which they are developed.

I. A false membrane is, in all cases, formed from the *plasma of the blood*, and which consists principally of its fibrine. It was remarked, several years ago, by Dr. Alison, that there is, in all inflammations, a *tendency* to the exudation of plasma from the vessels of the inflamed part. We maintain that in all inflammations an exudation actually does occur. It is, however, sufficient for our present purpose, that the plasma is exuded from the engorged vessels of the part and upon the surface, in all cases of inflammation of membranes, at least. Nobody doubts this assertion in regard to serous membranes; and even the purulent discharge (often called a secretion) from an inflamed mucous membrane, is known to be derived from the plasma exuded by a degeneration of the exudation-corpuscles into pus cells. Moreover, if an actual false membrane forms in croup upon the mucous surface, it is equally derived from the same source.

1. The first step towards the formation of a false membrane in croup, therefore, is the exudation of plasma upon the surface of the mucous membrane, as explained, in consequence of the laryngitis. The amount of the exudation will depend upon several circumstances; of which, the state of the blood, the extent of the inflammation, and the vascularity of the part, are the most important. In membranous croup, the exudation is most abundant, and therefore the resulting membrane is thickest, on the surface where the mucous follicles are most abundant; and this, in the trachea, is the case with the posterior wall. The follicles are merely an *inversion* of the mucous membrane; so that here is a great amount of free surface, and a vast number of small blood-vessels inclosed within a very small space. In other parts, the surface is much more smooth, the vascularity less, and thus the exudation, as well as the resulting membrane, is thinner. It has already been asserted, that it is not the secretion of these follicles that becomes organized, nor is the exudation "albuminous."\*

2. The second step in the development of a false membrane is the organization of the exuded plasma. But it is very well known that, in the majority of instances, this never takes place, even on serous membranes, and therefore no false membrane is formed.

\* The fact observed by Hasse, that fibrous bands or threads sometimes extend from the false membrane into the follicles, is thus shown to be precisely what we should expect.

In fact, three entirely different results may ensue to the layer of plasma exuded upon the free surface of a membrane in consequence of inflammation; provided it is allowed to remain in contact with it.

1st. It may be entirely reabsorbed.

2d. It may be converted into pus; exudation-corpuscles being formed in it, and these becoming, subsequently, degenerated into pus cells.

3d. It may become fibrillated (coagulated), and thus form a false membrane; which, subsequently, may become more highly organized; and, in case of serous membranes, even vascular, at last.

Now, either of these results is possible, in case of inflammation of both serous and mucous membranes. In case of the latter, however, the part affected may be so situated as to be brought into contact with foreign substances (as is the case with the mouth, pharynx, and other parts of the alimentary canal); and the exudation may thus become at once detached, and in that case, neither of the three results above-mentioned can ensue. Moreover, the opportunities for reabsorption on mucous membranes are very slight indeed, and often null.

To illustrate these results in case of a serous membrane: In *pleurisy*, the exudation being reabsorbed, perfect recovery takes place; if it becomes organized, false membranes and adhesions are the result; or if it is converted into pus, empyema is the result.

Now, the circumstances favorable to the organization of the plasma are:

1st. Its perfect contact with the living tissues;

2d. Perfect rest of the part, or maintaining the required contact, and for the necessary time also;

3d. Smoothness of surface, as also subservient to the first condition.

On the other hand, the following circumstances are unfavorable to organization:

1st. Motion of the part affected;

2d. Contact of foreign substances;

3d. Irregularity of surface.

But there are certain other conditions of the exudation itself, also, which affect the result. The former is more liable to become organized, and the membrane is more perfectly formed, in proportion—

1st. To the amount of fibrine contained in it;

2d. To the slowness (amount of time allowed) of the fibrillation.

Here we should, however, remark, that all the formative processes are in much less time completed in the young than in the adult animal; and it is in accordance with this ultimate fact, that Jurine and other experimenters could artificially produce false membranes in the air passages of young animals alone. In adult animals, the exudation would become detached before its organization was complete.

Now, if we compare the probabilities that an exudation upon a serous membrane will become organized, with those that the same result will occur upon a mucous membrane, we find the former allows—

(1st.) Of a far more perfect contact; since it is smooth, and comparatively or entirely at rest (*e. g.*, remark the immobility of the ribs in respiration, in pleurisy). (2.) It excludes the exudation from the air and from foreign substances. (3.) Allows time for the perfection of the process of organization. (4.) The fact, also, that contact of the exuded plasma with the living tissues occurs on both its surfaces at the same time (being between the two layers of the serous membrane), must not be omitted here. Nor (5) must we fail to add, that in case of inflammations of serous membranes, the blood (and therefore, probably, the exudation also) contains a greater amount of fibrine than exists in it in inflammations of mucous membranes.

Mucous membranes, on the other hand, are opposed to the serous, in all the respects just mentioned. 1. Having a conoidal instead of a delicate, scaly epithelium in most parts (*e. g.*, over the whole respiratory passages, and the alimentary canal from the cardiac orifice of the stomach to the sigmoid flexure), they do not allow of so perfect a contact of the plasma with the living tissue of the membrane itself. 2. They afford contact only on one side of the plasma. 3. In most parts, the plasma is exposed to the air and the contact of foreign substances. 4. There is more motion of the part. 5. All these circumstances afford less time for the organization to occur; so that it may fail of being completed, if commenced. 6. And, finally, the plasma itself is less organizable than in the case of inflammation of serous membranes.

We have no difficulty, then, in accounting for the fact that false membranes occur very much more frequently on serous than on mucous membranes. Nor is there any in accounting for the fact that, in certain cases, they are formed on the latter also, as well as the former.

False membranes have been known to form in cases of inflammation of the rectum, the vagina, the uterus, the nasal passages, the pharynx, larynx, trachea, and bronchial tubes; and in all these parts certain peculiarities exist, more favorable to the organization of the plasma than the mucous membrane in other parts presents. The rectum and vagina have a scaly epithelium, and are comparatively at rest—the rectum, even, being void of feces and of motion, except during the act of defecation. The uterus, also, allows of still greater rest of the exuded plasma, though it has a conoidal epithelium. The whole extent of the air passages is provided with a conoidal and a ciliated epithelium; but it has no foreign body in contact with it, except the air; and in this respect, and in point of motion of the surface, has the advantage of the alimentary canal above the rectum; where false membranes do not become organized. In children, however, there is less motion

still ; and, they also requiring less time, we should expect organization to occur more frequently than in adults.

Now, to return to the subject directly under consideration.

In cases of actual laryngitis with false membrane, or membranous croup in children, the exuded plasma becomes to some extent organized—*fibrillated* at least. But can we suppose that this result occurs in every case of laryngitis in the early years of life ? If the plasma is often absorbed, and also frequently converted into pus, in case of inflammation of a serous membrane (*e. g.* in pleurisy), can we doubt that either or both these results often occur in cases of inflammation of any and of all mucous membranes ? And to say that croup is a peculiar or *specific* inflammation, in order to account for the formation of the false membrane, would, for the sake of consistency, compel us also to invoke a *special* inflammation in those cases of pleurisy in which adhesions occur, while a *common* inflammation will answer if recovery occurs by absorption, or if empyema ensues. Our ideas, then, of the pathology of croup, so far as the answer to the first inquiry has established them, are these :—

1st. An inflammation of the larynx, extending into the trachea occurs ; offering in its essential nature nothing different from any other case of inflammation of the same parts, either in the infant or the adult. It is generally preceded, in both infants and adults, by congestion and irritation, and therefore by catarrh.

2nd. An exudation of plasma occurs on the inflamed surface, as in the adult ; this being most abundant, in the trachea, on the posterior wall, for reasons already given (p. 92).

3rd. This exudation may be disposed of, in at least two ways, provided it is not at once removed, as it generally is, in adults but not in infants, by coughing ; reabsorption probably very seldom occurring in this disease, though it is not impossible.

*a.* It may become degenerated into pus (purulent matter,) and thus, of course, at once be detached, which is the most common result.

*b.* It may become organized into a false membrane. This is more probable if the blood is rich in fibrine (*e. g.* in a plethoric child) ; if there is but little cough (an adult generally expelling it thus), and if time is allowed for its development (less being required in the child than in the adult) (p. 93).

4th. Croup is, therefore, merely a laryngo-tracheitis in infants and children, and offers nothing essentially different from the same inflammation in adults.\* The exudation in case of adults is, however, usually at once ejected by coughing, or in the form of purulent matter ; while the liability

\* The idea of Copland and others, that the false membrane in infants is due to a greater amount of *albumen* in the blood, is entirely without support.

to its organization in infants is greater; though, after all, a comparatively rare result, considering the whole number of cases—for the reasons before mentioned.\*

5th. Practically therefore, as well as pathologically, we cannot say with Bouchut, "*Without a false membrane, croup does not exist.*" This membrane never exists till the inflammation—the essential element of the disease, as we believe—has preceded, and has produced the exudation of plasma, as before shown. No sooner does the catarrhal irritation merge into inflammation, than the plastic lymph is thrown out;† and this inflammation and its accompanying exudation are the elements always present in croup.‡

We, therefore, need not, for any practical purpose, admit an "inflammatory and a membranous" croup, as some writers have done, any more than we should make the same distinction in regard to pleuritis or peritonitis. All croup is *inflammatory*, at any rate; and a few cases are also accompanied by the formation of a false membrane. But the latter should not affect the treatment of the disease as an inflammation, but merely from its mechanical effects, and cannot be predicated in any case till it is actually seen; and this is not possible in most cases in which it is developed at the very onset of the disease.

Finally, we would drop the term croup entirely, and use the term laryngo-tracheitis instead. In a work on the diseases of children, we would call particular attention to the fact that a false membrane is formed in about one-sixth of all the cases of this disease; while in adults, this is of very rare occurrence. But we would not make an accident the distinguishing feature of this disease, more than we do in the case of others, nor allow it to enter into either our name or our definition of it.

As in all other inflammations, so in this; the distinction of "sthenic" and "asthenic" is important, both in a pathological and a therapeutical point of view. So far also as laryngismus enters into any particular case—and it does into all cases of true laryngitis to some extent—the case is, of course *spasmodic*; but this term must not be applied to the exclusion of the idea of inflammation. *Genuine spasmodic* croup, we have already seen, is a mere laryngismus. There is more or less spasm in all cases of bronchitis, and still more in whooping-cough; in the latter case in the larynx also; so that infantile laryngitis does not present any peculiarity in this

\* In Dr. Ware's "Contributions to the History and Diagnosis of Croup," false membrane was found in only 22 cases out of 131, or about one-sixth of the whole.

† Hasse's Diseases of Organs of Circulation and Respiration, p. 277.

‡ Dr. H. Green also holds this idea, though in different terms. See his work on Croup, p. 13.

respect. *Catarrhal* infantile *laryngitis* we regard as a contradiction of terms (p. 90).

2. Does *laryngitis* (and *tracheitis*) with false membrane occur in the adult, as in early life?

We do not hesitate to answer this question in the affirmative, having seen such membranes ourselves, and having demonstrated their fibrillated structure under the microscope. Such cases are comparatively rare, for the reasons already assigned (p. 95; *b.*); and therefore occur more frequently in females who are not accustomed, or (as in some instances) not able, to expectorate at all. I received and still retain such a membrane, expelled in a tubular form by an adult female patient of Dr. G. W. Garland, now of Lawrence, Mass.

Even "membranous croup,"\* then, if we retain the term, occurs, though rarely, in adults, it being at all ages essentially the same disease so far as its pathology is concerned.

3. Is croup a *specific* inflammation?

Our negative reply to this question has already been anticipated (p. 95; 4th).

4. In infantile laryngo-tracheitis with false membrane, does the danger to the patient result almost entirely from the presence of the membrane, as seems to be so generally admitted? or is the inflammation alone often sufficient to produce death?

Surely no reason can be assigned why a disease so fatal to adults as *laryngitis* and *tracheitis* should not be equally so in early life. And yet, since the decease of the "Father of our country" to the present time, adults have died without the formation of a false membrane, in almost all instances, so far as can be ascertained.

The fact cannot be overlooked, that an inflammation of the larynx is a serious and a dangerous matter, at any time of life, as a mere *inflammation*, aside from the final disposal of the exuded plasma. The treatment is therefore to be directed primarily to the disease as a mere inflammation. Of course, the formation of the membrane brings a new danger to the patient, since it partially, and (if it extends to the bronchial divisions in the lungs) in some parts completely, closes the air passages, and thus produces a gradual asphyxia. Occurring, as it does, also, after the patient is reduced by the previous inflammation, its dangerous effects are increased.

But we must, however, bear in mind the fact that the membrane is not organized till the *inflammation has subsided* in the part. The inflamed vessels relieve themselves by the exudation, and thus the inflammatory process is arrested.\* The treatment, therefore, to subdue inflammation, so

\* "The secretion of the lymph *weakens* the inflammation most commonly, and in  
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proper at first, is *not* proper after the false membrane is formed in the larynx and trachea. We have here a *consequence* of inflammation to treat, in a part which the inflammation itself has left. But this point will be more definitely considered farther on. The thicker the membrane, the greater the danger and amount of asphyxia; but the small trachea of an infant being closed in a greater ratio by it than the larger tube of the adult, the danger is comparatively slight in the latter from its formation. It is seldom more than  $1\frac{1}{2}$  line thick at the thickest part, in the child; and usually  $\frac{1}{2}$  to 1 only. But before proceeding to apply the preceding views to the treatment of infantile laryngo-tracheitis, the following points also may profitably be briefly alluded to.

1st. The progress of laryngo-tracheitis is invariably from above downwards. The observations of the best pathologists have established this point. Generally, or at least very frequently, a catarrh commences in the nasal passages, and extends backwards into the pharynx; then, descending into the larynx, continues such for a time, or at once merges into an inflammation. Often the pharynx becomes inflamed, and a false membrane appears upon it before the inflammation descends into the larynx and trachea. In some cases the larynx may be the part first affected; but if so, such cases are to be regarded as exceptional, and the inflammation never extends upwards, but always downwards from that organ. The existence, therefore, of a catarrh for two or three days, and especially of a false membrane on the pharynx, before the peculiar ringing cough of infantile laryngitis occurs, are most important elements of diagnosis in this disease, though their absence is not *demonstrative* of its non-existence. It will be recollected, therefore, that we said the exudation of plasma relieves the inflammation of *the part*, though at the same time it may be extending downwards to other parts lower in the air passages.

2nd. In infantile laryngitis it has been stated that it progresses downwards into the trachea. In some cases (and not unfrequently) it extends into the bronchi, and even into their subdivisions in the lungs. The exudation is sometimes so copious in the smaller tubes in the lungs, that they become filled with a solid cylinder of plasma, instead of being lined with a false membrane. The same often occurs in cases of bronchitis in adults. We can have no warrant that this result will not occur in any case where a

*the end puts a stop to "it entirely."*—*F. Ryland on Diseases and Injuries of the Larynx and Trachea, p. 134.*

Exudation always at once puts a stop to the inflammatory process in the precise part where it occurs. But it does not necessarily preclude its return in the part; and therefore, in croup, two or three membranes, it is *believed*, have sometimes formed in succession on the same surface. We, however, wait for farther proof of this assumption; though the possibility is admitted.

false membrane has been formed ; nor that convalescence will commence at once, though large portions of it have been expelled from the trachea. Nor can we expect the convalescence to progress rapidly as soon as the laryngismus and ringing cough have ceased, since a bronchitis may still remain for a few days, or may even prove fatal at last.

Some seem to think that if the false membrane is removed from the larynx and trachea, all danger is over. Nothing, however, is gained by merely passing the air through the *air passages* ; it must enter the *air cells*, before the blood is aerated thereby. Whether, therefore, the trachea is diminished to one-half of its capacity by a false membrane ; or one-half of the smallest bronchial tubes are completely closed by solid cylinders of plasma, will not make the least difference so far as the production of asphyxia is concerned.

3rd. The false membrane is often formed in a very short time after the exudation is found out (see the conditions, p. 93) ; but it is an important fact that a false membrane formed on a mucous surface never becomes vascular, and therefore permanent, as it may on a serous membrane ; but it *soon becomes detached, and spontaneously falls off*. This is well known to be the case in vaginitis and the endo-metritis which sometimes accompanies dysmenorrhœa ; and the disease now under consideration is not at all different from these in this respect. Only a fibrillation existing in the false membrane, and therefore no vascular connection between it and the sub-jacent surface, it soon loses its slight vitality, and is cast off accordingly.

The time elapsing before the spontaneous detachment of a false membrane varies in different cases ; but seldom exceeds five or six days after its formation. But this result will surely occur, if the patient's strength continues, and thus life is sufficiently prolonged to afford the necessary time.

4. It has been seen that laryngo-tracheitis occurs in the adult as well as in the infant ; but is not the "Diphtherite" of Mr. Bretonneau a different disease ?

We see no necessity for any such admission. In diphtherite, the false membrane, almost always covers the pharynx and tonsils, and often extends into the posterior nares, covering both surfaces of the velum ; and then descends into the larynx and trachea. The same often occurs also in connection with scarlatina and rubeola.

But all this also, often occurs in the young child, and therefore the terms "Diphtherite," or "Croup of Adults," we consider objectionable, as calculated to foster the idea of a radical difference as to the nature of inflammation of the larynx and trachea in the young child and the adult, while they are pathologically the same. To say that this is an "exudative inflammation" of the parts affected, is tautology ; since all inflammations of membranes are accompanied by an *exudation* at least, as already shown.

*Diagnosis of Infantile Laryngo-Tracheitis.*

While it is in the highest degree important that a correct diagnosis be formed early in the course of this disease, it must also be acknowledged that this is often a matter of the greatest difficulty. We are, however, decidedly of the opinion that if the usual "perturbating" treatment of the disease is to be carried into execution, the little patient's prospects of ultimate recovery will, in most cases, be at least as good if we commit the mistake of deciding that the disease does *not* exist when it actually does, and thus give the patient the chance of recovery without any medication at all, as if we err in the opposite direction, and therefore apply the treatment though there is no serious disease at first.

In a suspected case, therefore, we would assume that this disease does not exist, till some positive reasons appear for the opposite conclusion.

The question is usually between laryngo-tracheitis on the one hand, and mere laryngismus or catarrh on the other. The general differential diagnosis of these three pathological conditions, may be expressed as follows:

<i>Laryngismus.</i>	<i>Catarrh.</i>	<i>Laryngo-tracheitis.</i>
Attack sudden.	Ditto gradual.	Ditto gradual, and often preceded by catarrh.
Usually attacks delicate and irritable children.	Attacks children of all conditions.	Most frequently attacks robust children.
Is an affection of the spinal (diastaltic) nervous system.	Is an irritation and congestion of the mucous membrane.	Is an inflammation of the membrane affected.
Neglected, the attack may pass into general convulsions.	Neglected, may be transient; or, inflammation may ensue.	Neglected, recovery may, after several days, occur; less probably in the membranous form.
Is no fever.	No fever usually at first.	Constant febrile symptoms.
Attack sudden; cessation ditto.	Progress and decline gradual.	Ditto ditto.
Eyes unaffected; no sneezing, or discharges.	Suffusion of the eyes; sneezing and discharges more or less copious and acrid.	These symptoms generally precede for two or three days the development of laryngo-tracheitis.
Cough absent during intervals of attacks; seldom croupal during them.	Cough persistent, short, frequent, and harassing; not croupal.	Cough persistent, and peculiar—"croupal."
Respiration free in the intervals; often stridulous during attacks; no uneasiness in air passages during intervals.	Respiration hurried; tickling or relaxation in the throat; redness and tenderness in the fauces.	Respiration has peculiar sound; inspiration being "stridulous." Fauces injected at least.
Voice unchanged in the intervals.	Voice hoarse; uneasiness and tightness of the chest.	Voice husky or lost, continuing so constantly.
No false membrane on the fauces.	Do. do.	False membrane sometimes on the fauces.
Caused by irritation of dentition, disordered bowels, &c.	Caused by exposure to cold, or inhalation of irritating matter. Is often epidemic.	Caused by exposure to cold and damp; less frequently epidemic. Children of some families peculiarly liable to it.

If we find, in addition to the preceding signs, that portions of false membrane have also been ejected, the case is demonstrated to be "laryngo-tracheitis with false membrane," this sign being pathognomonic of this form of the disease.

If, then, a child, hitherto in perfect health, wakes in the night with a croupy cough and stridulous breathing, the presumption is that it is mere laryngismus; and this idea is confirmed if the patient be a delicate, irritable child, and has not completed the process of dentition, or is probably suffering from irritation in some portion of the alimentary canal. A simple emetic of ipecac. or wine of antimony, is the most powerful remedy which would be justifiable in such circumstances; and such a remedy will usually at once remove the symptoms.

If the child has had a catarrh for two or three days, however, the danger of laryngo-tracheitis is increased. But if there is no fever, we are not yet justified in considering the case any thing more serious than catarrh. The prevalent medical diathesis of the time will, however, aid much in deciding this point. If there is an epidemic catarrh at the time, the previous presumption will be confirmed, and mild treatment only will be justifiable. On the other hand, if laryngo-tracheitis is common at the time, the patient must be watched with the greatest care, after the simple remedies required by the present condition have been administered. We are, however, also to remember that a dryness of the mucous membrane, in exposure to cold, may produce a sudden hoarseness like that of catarrh.

The probability of incipient laryngo-tracheitis is increased, however, in the circumstances just mentioned, if the patient, or if an older child in the same family, has before had an attack of this disease; while a previous attack of laryngismus, or mere catarrh, with similar symptoms, leads to the opposite presumption. The existence of a false membrane on the pharynx, confirms the idea of true laryngo-tracheitis. Hence, the fauces and the pharynx should, in *every case*, be carefully examined.

The stridulous inspiration of laryngo-tracheitis may be very well imitated in mere laryngismus; and in the former disease may often be detected by the aid of the stethoscope, before it can be in any other way.

These are the most prominent points to be observed in enabling us to distinguish laryngo-tracheitis from mere laryngismus and catarrh. It is not deemed necessary here to enumerate the points which distinguish it from erysipelatous and submucous laryngitis, or oedema glottidis, which may result from them.

The question in regard to the sthenic and the asthenic varieties of laryngo-tracheitis, must be decided by the character of the symptoms, and the condition of the child at the time of the attack. The presumption may be that the disease will assume the first form in a robust, plethoric child,

and the second form in opposite circumstances. Regard must also, however, always be had to the medical diathesis of the time; the strongest children not unfrequently having the asthenic form of the disease, from certain contemporaneous epidemic influences.

(To be concluded.)

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*Mental Derangement—its Symptoms and Treatment.* By ROGER G. PERKINS, M. D., Senior Assistant Physician, New York Lunatic Asylum, Blackwell's Island.

Insanity is a term applied, by those who use it correctly, to that state of mind in which healthy action is suspended. This is, perhaps, as complete a definition as can be given of the disease. It has been defined "a loss of mental freedom," "a destruction of spontaneity in psychological action." These definitions, both meaning the same thing, are neither of them admissible, as they embrace sleep-waking and dreaming.

Locke's definition was, that madness consisted in "reasoning from false premises." Cullen calls insanity, a false perception and consequent erroneous judgment. Prichard has well remarked, that both these definitions embrace but one form of mental disease, viz. hallucination. His own definition is as follows: "A chronic disease, manifested by deviations from the healthy and natural state of the mind; such deviations existing either in moral perversion, or a disorder of the feelings, affections, and habits of the individual, or, in intellectual disarrangement; which last is sometimes partial, as in monomania, affecting the understanding only in particular trains of thought; or general, and accompanied by excitement, namely, in mania or raving madness; or lastly, confounding or destroying the connections or associations of ideas, and producing a state of incoherence." The main objection to this definition is the use of the word *chronic*; insanity is oftentimes acute, both as to time and phenomena. Again, the definition is too long; and, long as it is, does not include the delirium of fever, the coma of apoplexy, or the lethargy sometimes following epilepsy, all of which diseased conditions belong to a mind not "*sana in corpore sano*," and, consequently, are improperly considered as any thing else than forms of insanity. The great difficulty found by many writers on this subject, in attempting to define this disease, has been lest they should include the delirium of fever; but, without doubt, any one of these authors, if called upon to testify in the case of a man who during the delirium of fever had murdered his child, would urge his acquittal on the ground of temporary insanity. Throughout the whole extent of the writer's reading, there has been found no definition which seemed so proper as that which stands at the head of this article, and which naturally sug-

gested itself to him, as it without doubt has to many others, at the very outset of his undertaking.

All forms of mental derangement can be included for description in four classes: 1st. Mania. 2d. Melancholia. 3d. Dementia. 4th. Moral Insanity.

It is proposed to consider these four forms of mental disease separately.

I. Mania is divided into general and partial, each of which divisions contains several varieties.

The word is derived from the Greek verb signifying to rave. It has been in use as applied to this form of disease from the earliest periods of the history of medicine. Its appropriateness has never been doubted.

A patient upon whom general mania is making its approach, generally exhibits nearly the following symptoms immediately before the full development of the disease: Every natural thought and feeling is exaggerated. At first, this is scarcely noticeable; but, after a short time, the exaltation becomes more and more manifest; soon we observe former objects of quiet and unobtrusive affection are treated with the most persuasive and endearing fondness, and at the same time that those who may once have incurred the displeasure of the patient, are spoken of with a bitterness and angry vindictiveness totally inconsistent with the previous character of the individual. The patient is evidently becoming more and more a creature of impulse, and cannot fix his attention upon the ordinary employments of the day, but is wandering with strides increasing in rapidity from one thing to another. As the excitement increases, the wildness and often redness of the eye begin to attract attention. The heat of head is sometimes found to be considerable, though the patient has, perhaps, made no complaint of pain; the pulse may be full and frequent, or small and quick; the tongue is sometimes furred, the bowels costive, the skin nearly normal; not unfrequently the hands and feet, perhaps arms and legs, are cold and clammy; the muscles of the face are beginning to seem more prominent, and it may be they act spasmodically; the expression of the countenance is rapidly beginning to change; and the language, growing more and more rapid, loud, and boisterous, is interrupted by strong exertions to procure self-control, and is, perhaps, not unmixed with loud laughing or tears, as the subjects of conversation be gay or sad. At this time a wondering question, or provoked remonstrance, falls upon the patient's ear from someone who witnesses his strange actions. The patient flies at once into a passion; his abuse is loud and terrible; horrible blasphemy is poured forth with extreme rapidity; and, wildly gesticulating over the extended arms of those who seek to curb his fury, he heaps the curses of all the gods and fiends upon the devoted object of his anger. The ideas follow so quickly upon one another, he

cannot finish the expression of one before another claims his utterance, and the first is left unfinished; at last, so fast do the ideas throng through his mind, he can no longer be coherent; in his eagerness to express them all, confusion follows, and the patient is a raving maniac. This is acute mania.

It is generally three or four days before the symptoms above recited render it necessary to confine the patient, and during this time much may be done to lessen the violence of the expected attack; but of this, further on. The occurrence of acute mania, as above described, is preceded by some months, perhaps only weeks, of ill-health, slight depression of spirits, headache, sleeplessness, and anxiety, all of which precursory symptoms are vividly remembered by the friends of the patient, after it is, perhaps, too late for their treatment. Where the nervous temperament predominates, and particularly in those in which there is hereditary taint of insanity, the physician can hardly be too careful in his attentions to patients complaining of headache, sleeplessness, etc., as, by proper means, insanity is many times averted. After the patient has become raving in his madness; when the rapid incoherence, with wild gesticulations and other symptoms, have become perfect masters of the patient, and total loss of self-control has ensued, the condition of the unfortunate maniac is pitiful indeed. With few exceptions, the propensity to rend has full force; the patient speedily disrobes himself, and his clothes are in tatters in an hour. Windows (if within his reach) are shattered; and, reckless of the wounds upon his hands, caused by the broken glass, the doors and walls resound to his impetuous beating, while the air is filled with howling blasphemy. The natural evacuations are strewed upon the floor and smeared over the walls; articles of furniture are broken; mattresses emptied of their contents; bed-clothing torn to ribands; when, finally, finding nothing more within his reach, the patient throws himself upon the rubbish he has formed, and, amid tears and laughter, buries himself beneath it. Upon the entrance of another, he may be calm for a moment; as soon as he opens his mouth to speak, however, there rushes from it a storm of curses and reproaches. It is not possible to say how long this state of things would continue, if uninterrupted by medication, as the deep injustice of an experiment upon such a case has not been attempted: it would probably last until the patient should sleep through exhaustion, or become weak through abstinence. From *fitful* sleep he wakes but to continue his ravings, and from the food demanded he gains additional strength to do so. Long before this, however, proper medication has doubtless been used, and its effects begin to manifest themselves. The hallucinations are generally those of fear and suspicion. The suspicion may fix itself upon the nearest friend, in fact, it generally does so, and the feeling may become so strong as to reach an homicidal point.

The fear, in almost all cases, is for his own life, and under these circumstances the patient almost always attempts suicide.

The state of bodily fear in which he is, is too intense; and rather than endure it any longer, he attempts to place himself beyond the reach of it by self-destruction.

Chronic general mania pursues the same course as the acute, but not with so great violence, and with occasional complete remissions. During these lucid moments, and short moments they often are, the patient not unfrequently acknowledges his illness, is thankful for kindness, and sometimes profuse in his apologies and expressions of obligation.

As will be easily conceived, this continued raving cannot long exist without, sooner or later—as the constitution of the individual will admit—the supervention of extreme emaciation and pallor. The earnest, fixed, and glassy look soon takes full possession of the eyes; objectless and almost constant movements of the hands, often accompanied with twitching of the muscles of the face, are now present. The appetite, which while the mania was acute was but little, almost always entirely gone, oftentimes becomes voracious.

The bowels, before obstinate in constipation or diarrhœa, are now, perhaps, regular. The skin assumes an unnatural dryness, hardness, and color. The pulse is ranging from 90 to 100, full and strong—or from 108 to 116, small, weak, and irritable. The tongue, no longer much furred, is nearly normal—though, in cases of small and irritable pulses, the papillæ are elongated. The temperature of the body of the patient is generally nearly normal. The pupils largely dilated.

Partial mania, as seen in both its acute and chronic forms, presents only difference in length of duration. It consists in hallucinations, with or without violence. When violence is present, it is intimately connected with the delusion. Hallucinations can be classed under several heads. We have them of self-esteem in large numbers; of veneration and self-esteem, as seen in the delusion of Divine power, or the possession of the attributes of Deity; of amateness and philoprogenitiveness (nymphomania, erotomania, satyriasis); of acquisitiveness (as of wealth); of approbateness (as of ambition); of cautiousness (as of fear and suspicion); in fact, the forms which are assumed by the delusions of the insane are far too numerous to be mentioned here.

Of all these forms, however, much the most common are those depending upon fear and suspicion.

It is under the influence of this delusion that many of the insane are guilty of homicidal and suicidal attempts, as has been before stated when speaking of general mania. It is perfectly natural that, under the impres-

sion that they are the objects of injury from a second party, they should attempt to rid themselves of his harms and devices summarily and at once.

*Violence*, when it accompanies *partial mania*, is almost always called out of opposition. The king of Europe has a right to be angry with, and perhaps strike, the man who claims a right to the same sceptre. The owner of *all the gold mines in the world* deems herself an ill-used woman if anyone shall claim the proprietorship of any one in particular. The result of this clashing is loud talking, then threatening; and, unless it stops here, where those in charge generally interfere, blows and blind fury are the consequence.

The general physical health of patients suffering from *partial mania*, is good in many cases. *Anæmia* is the prevailing physical derangement, where any exists. The heat of head is sometimes noticeable on the advent of excitement, and the pulse is not unfrequently quickened.

Under this class it is proposed to speak of *puerperal mania*, though often the patient is *generally*, instead of *partially* insane. This form of mental derangement, so peculiarly interesting, inasmuch as it involves the happiness of so many and separate ties so closely woven, is connected invariably, as far as our observation goes, with a state of *anæmia*, and high, general, nervous excitement of the physical system. The onset of the disease may occur during gestation, parturition, or lactation. When seen in connection with gestation, it is easily confounded with an exaggerated hysteria; in fact, when occurring at this or any other period, it may be considered as a disease arising from *hyperæsthesia*, and therefore belonging to the same class as simple hysteria.

Occurring during parturition, in the one case in which I have seen it, it assumed a low muttering form, with occasional outbursts of violent fear. When present, as is the case in most instances, during lactation, its exciting cause may be supposed to be a stoppage of the flow of milk, or some other physical phenomena. A mental excitement, and, perhaps, still more frequently taking cold, are the prominent causes directly operating upon the predisposing state of *anæmia* and nervous excitement, many times observed among lactiferous women. Any case of mania occurring within twelve months after the birth of a child, is called *puerperal*. Attempts at suicide, and sometimes infanticide, are very common in this form of insanity.

Jealousy and abuse of the husband are oftentimes present. Religious impressions are not unusual, and considerable fear is manifested. The patient now and then becomes melancholic and demented, and sits for hours speechless and inattentive, and perhaps becomes filthy in her habits. Other cases are very violent, and are more properly described as affected with *general mania*, raving night and day, with filthy and blasphemous language and exposed persons.

The restraint of a camisole is often needed for them.

To this class may be said to belong the most hopeful of our cases.

It is well known that pregnant and lactiferous women are physiologically in a state of great nervous susceptibility. External impressions call forth a ready response; and in females of a nervous diathesis, any irritation of conduct or language, any neglect on the part of others, any tidings of an exciting character, and any influences producing fatigue or annoyance, should be most carefully avoided. It is beyond doubt that in many instances patients have passed through some of the precursory symptoms of this form of disease, and recovered, without becoming so uncontrollable as to be sent to an asylum. They owe their recovery, in many cases, to the fact that the nearness to insanity was not for a moment suspected by the physician, and to the continued kindness and forbearance of their nurse and husband.

Had tendency to insanity been thought of, perhaps the tonics indicated by the anæmia might have been suspended, lest they might add to the violence of the paroxysm. The cessation of tonics, in these cases, invariably proves disastrous. It is not proper that the consideration of the symptoms present in this form should be left without more marked reference to the propensity generally existing, to use filthy and blasphemous language—particularly the former. Ideas the most repulsive are constantly expressed; and a wanton exposure of the person, with sometimes a great desire for sexual intercourse, in many cases form the principal symptoms. The continued congestion of the ganglia of procreation seems to react upon the cerebrum, and the language is influenced by it. It may be observed, in passing, that the same rule holds good in relation to the congestion of the ganglia of digestion; this state of things also reacting upon the cerebrum, ideas of foreign substances in the stomach are born, which ideas will continue until the cause is removed.

Typhomania is a form of insanity which has only of late attracted the attention of psychologists. As the name would seem to indicate, it consists of the worst symptoms of general mania, accompanied with a marked typhoid tendency. There is unwillingness to eat or drink; and all food as well as medicine must be forced upon the patient by means of "the wooden spoon," a description of which will be found in that part of the paper which is devoted to the consideration of treatment.

From this last symptom—always prominent—we have a right to assume the existence of hallucinations of suspicion and fear, though in the cases observed by the writer, in all numbering about a dozen, the incessant incoherence, loud and angry raving on all subjects, smiting upon the doors and walls, has prevented their discovery in more than two instances. The patient stands naked in the room, eyes suffused with unhealthy moisture;

lips and teeth covered with sordes; tongue loaded with brown or black fur; head and general surface hot and dry; pulse 120-130. With all these symptoms of constitutional weakness, the patient jumps up and down, beating the floor with his bare feet, and crying out at the top of his voice, for hours together.

The physical strength, when put in opposition to the attendants, where medicine or food is to be given, is oftentimes very remarkable.

In the cases I have seen, there has been no suicidal attempt. The general employment of the "*camisole*" may, however, account for this fact. The mortality is very great, though more success has followed the exhibition of stimulants than any other treatment. Depletion would undoubtedly destroy the patient.

In regard to the nature of this form of mania, some have considered it an aggravated febrile delirium, some as mania complicated with typhus fever, others again as an hitherto undescribed form of mania.

Our experience of typhus and mania in their ordinary and extraordinary forms, permit us to hold only the opinion that it is truly a form of mania, bearing the same relation to that disease as the pneumonia typhoides does to the pure pneumonia.

It cannot be the delirium of fever, for the hallucinations of delirium consist only in false perceptions. Here the delusions of fear and suspicion are certainly present in some cases, and are firmly believed to exist in all.

It can hardly be mania accompanied by typhus; as it is difficult to suppose that two such mammoth diseases should be incubating in the system for months at the same time, and should together begin to exhibit themselves. Again, while it is easy to see the possibility of the specific poison of typhus attacking a patient sick with brooding melancholy or dementia, inactive and sluggish, it is far from easy to conceive of a system in a high state of nervous exaltation as in any degree susceptible, so long as this exaltation continues. The fact that typhomania sometimes occurs in localities where typhus may easily be supposed to exist, is admitted; but it is known to occur also in those regions where typhus is as much a stranger as mania. Again, premonitory symptoms of weeks' and months' duration can many times be traced in the history of typhomania. In typhus, this is known to be otherwise.

II. Having thus cursorily glanced at the symptoms of one of the principal forms of insanity, and having followed any peculiarities into the class in which they exist, it is proposed to proceed to the next form—*melancholia*, which is frequent among the insane in this city, owing to several facts to be at once referred to. Four-fifths of the insane in New York are of foreign birth—a large proportion of those are uneducated, and can neither

read or write. In their hearts the love of country, of home and friends, is predominant, and wholly beyond the control of their undeveloped minds.

Their spontaneity having been seldom called into exercise, in consequence of the political and religious institutions under which they were born, is without power to rouse them from the contemplation of their loss, continually thinking on the lost objects of their affection, the mind, unemployed in reading or writing in consequence of lack of education, rapidly loses its tone; the lowness of spirits becomes greater and greater, till at last the night of insanity covers the soul with darkness like nothing but itself.

Another form of melancholia, also the result of morbidly exaggerated affection or feeling, is found following the loss of friends by death, unrequited love, disappointed ambition, loss of property, &c. A truly well-balanced mind will never yield to these mishaps. A truly philosophical sense of our duty to the living, will always prevent the access of morbid melancholy for the dead. Unrequited love, perhaps the hardest to bear, is, properly speaking, no cause of melancholy, save to the ineffably selfish.

Loss of property or disappointed ambition, to a well-regulated mind, are only additional incentives to extra exertion. Remorse itself can but for a short time press upon a philosophical spirit, if it is allowed the consolations of religion.

The melancholy which is the result of physical derangement is, however, of an entirely different character. There is no reason why minds of the most thorough cultivation, and most absolute self-control and general spontaneity should not yield at once.

The mind occupied with thoughts infinitely removed from physical self-contemplation, is not aware of the insidious disease which by-and-by shall raise its strong head and call upon the brain for sympathy; and by the time the terrible presence is discovered, wakeful nights and torturing pains have so undermined the mental constitution, as to leave that "thing of beauty" which all hoped would be "a joy forever" at the sport of its own vain imaginings.

Of all the physical causes, productive of melancholy the most frequent is dyspepsia among men, and disease of the cervix-uteri among women.

Diseases of the liver, of themselves, as well as in their connections with general digestive derangement, are a frequent cause. Cancer, or even chronic inflammation of the stomach, are often present as causes; and hernia in all its forms, may also be classed in the same category. Hypochondriasis is the first step toward melancholic insanity, in many instances; and when, at last, insanity is reached, the hallucinations are sufficiently ridiculous.

The condition of the melancholic is, whether the disease is of mental or physical origin, one appealing to our kindest sympathies.

It is seldom accompanied with violence, unless in opposition to medication and curative agents. When, however, violence occurs, the type of the disease is that of general or partial mania. Constantly hopeless and despairing; often weeping; sometimes gazing, in an apathetic indifference, upon vacancy; answering, when spoken to, in the most plaintive tones, and referring, at all times, to the cause of their heart-breaking sadness. This class of patients occupy a place in the world without *filling* it, live neither in the present or future—contemplating only the past. Sometimes in melancholia from hypochondriasis, amid tears and moans, you are informed that a serpent is within the stomach, gnawing at the vitals; that crabs, shoemakers, poodle-dogs, fire, glass bottles, poisons, stones, laudanum, handkerchiefs, iron hoops, swords, in short, any thing you please, wasps, men and women, pepper, acids, etc., are in the belly; in another direction is one who assures you his legs are glass, and his head is a pumpkin. Here is seen the intimate connection between the ganglion of digestion and the cerebrum—the irritation of the one calling upon the other for sympathy.

III. *Dementia*, the third form into which we have divided insanity, consists either in complete incoherence or complete inaction (amentia). The incoherence is too great to allow of the presence of “fixed ideas”—hallucinations—in the one case; and the total want of mental action, accounts for their absence in the other. Dementia is rarely acute. It most frequently follows upon acute general mania, and treads fast after the melancholia of the affections. It is also a *sequela* of the melancholia incident upon physical disease, though not so commonly as of the other form, unless the brain is involved in the organic lesion.

A patient having dementia, not unfrequently has moments of acute mania; sometimes those maniacal periods extend over a longer space of time, and for a few days the exaltation may be a marked symptom. Dementia, however, soon follows, and the patient is as abject and stupid as ever: any hopes formed upon those sudden changes are seldom destined to be fulfilled.

This form of insanity has three stages: loss of memory, loss of comprehension and reason, and loss of instinct. The three stages merge into one another, and it often occurs that the transition from one to another is not noticed. In the first stage, the loss of memory not interfering with the reason, that faculty is only slightly affected; provided the premises are constantly before the patient, his reasoning is not deficient: thus, a game of chess, or draughts, as the patient can have the situation of the men before him continually, is played by a patient in the first stages of dementia with a semblance of the skill which belonged to him before his illness; but if two facts are presented for his comparison, he forgets one in the study of the

other. This stage may continue for some time, and, perhaps, the patient may never pass through the other forms of the disease.

In this stage, dementia is considered curable, in some instances; it is always, at this time, treated with hope. The second stage gradually makes itself prominent, and the patient is seen no longer to take interest in things about him, however agreeable they may have been formerly: with his hands in his pockets, or with arms folded across his breast, he stands stock still, his chin resting upon the top of the sternum, and his eyes cast to the ground; all day, through all kinds of weather, he would, perhaps, remain in this position, unless moved by his attendants. The most amusing incidents, the most moving events, pictures, music, &c., fail to arouse him, except with great difficulty. If the head is raised, by force, from its forward inclination, by the hand of the physician, and patient is addressed in a loud voice, the expressionless features do not respond, though the lips may commence an inarticulate, meaningless, reply. The extremities become swollen and œdematous; the circulation is languid; bowels are more or less costive; while the appetite is often voracious; and a desperate inactivity settles upon the whole mental and physical man.

It not unfrequently happens, that between the second and first stages, the physique is not so much involved as to prevent the objectless wanderings and continued mutterings of incoherence. The patient is then seen walking within the inclosure where he may be placed, now and then stooping to collect all sorts of trash lying upon the ground, which he carefully places away in his pockets, muttering the while in disjointed sentences, and often repeating mechanically the same words. His gesticulations are not violent, but consist in simple affirmatory inclinations of the head, with now and then a wild flinging about of the arms. The silence and immobility above described as pertaining to the second stage, soon make their appearance.

The third stage, involving the loss of instinct, places the man at once below the brute. No regard is paid to the taking of food, or the passages of the evacuations. The patient becomes the most loathsome and disgusting object in nature; and it is oftentimes wonderful how long this state of vegetation continues.

We pass rapidly from the painful consideration of this stage, only remarking, perhaps unnecessarily, that hardly any cures are ever known from its first onset. Death generally frees the unfortunate from his disease. The cases of this form, in many lunatic asylums, are numerous; as the accumulation of incurables generally die in this state.

IV. *Moral Insanity*, is a disease of the affections and feelings: in it the mind is not necessarily involved. When it occurs in connection with partial mania, the cases are most difficult and unmanageable. When occurring by itself, antipathies of an exaggerated character, and the most utter

disregard of truth, are prominent symptoms. With the most unblushing effrontery, the patient will demand our belief of false assertions—perhaps likely to be true—to the injury of others; and, with the perfect knowledge on his part of the falsity of the accusations, tell a consistent story against those for whom he has an antipathy. When asked as to the reason of his antipathy, he does not know why he cherishes his hate, and can scarcely be got to acknowledge his lie. In the progress of the disease he becomes filthy, insolent, and overbearing, and seems driven on by the Spirit of Evil to do evil simply for evil's sake. An individual laboring under this form of disease, may pluck a flower and trample it in the earth, for no other reason than because it is beautiful, and may afford enjoyment to others; he may injure the fair fame of a woman, because she is virtuous; or, he may hate the wife of his bosom, because of her fidelity. In the advanced stages of this disease, there is a disposition to rend, and the habits are of the most filthy and revolting character. In purely moral insanity, no delusions exist. Patients have been known to excuse themselves from their habits, on the ground of insanity.

At the commencement of this article, it was the intention to dwell to some considerable length upon the *causes* and *pathology* of insanity, as well as upon its phenomena. The large amount of space already occupied in a recitation of symptoms, with now and then a reference to causes, and indirectly to pathology, seems to forbid this course in the present paper.

The importance also of a careful and thorough exposition of the system of treatment, is at once so evident, that the writer feels less reluctance to leave the causes and pathology untouched, than would otherwise be the case. The causes of insanity, if properly treated, would make a long paper, in however condensed a style it might be written.

The pathology is, in many cases, uncertain; and years are yet required to make fixed facts of certain microscopic changes observed in the cerebrum; and, under these circumstances, this part of the subject is left without unwillingness.

The treatment of insanity is both medical and moral. It is of the medical we shall principally speak at this time. In the management of this disease, we are guided by the same general principles as in that of every other. Our first step is to remove the cause. If that cause is a physical disease, its treatment, and if possible, its cure, is our first duty. If physical symptoms are not at first prominent, they are to be sought for with great care: in almost every case they exist, and demand treatment. It should be borne in mind that insanity is but a symptom, and as such, its origin should be discovered at once.

That the desired treatment may be carefully carried out, the first object of the physician, on being called to a case of mania for its treatment, should

be to procure a strong, quiet, trustworthy, and patient man, as attendant. This person, upon whom great responsibility rests, should have the virtue of consistent firmness with unremitting kindness. He must be entirely under the control of the physician, and must in the cases of mania never lose sight of the patient under any circumstances whatever. He must be provided with a camisole, a "wooden spoon," and additional aid, if he requires it, to enforce the physician's orders. This camisole (French for waistcoat) is a jacket made from sail-cloth. The sleeves are two feet longer than a man's arms. The jacket is fastened behind with strong buckles and straps. The arms, passed into the sleeves, are crossed upon the chest, and the two long sleeves are brought behind and tied together. When a patient is within this enclosure, his arms are confined, not at all uncomfortably; and, the only opening of the camisole being behind, by no possible manœuvering can the apparatus be removed by the patient. In this condition, the idea of his helplessness will soon take possession of the patient's mind, and he will often submit unwillingly to take the medicine ordered, as well as the food before refused. If, however, he persists in his refusal of food and medicine, he must be placed gently upon a mattress, his face uppermost, of course, and the wooden spoon used to administer what has been ordered. The spoon is a very simple, but very effectual contrivance. It consists of a spoon made of wood, in all respects resembling the ordinary form; the handle of it is hollow, and the cavity within extends to the point of the bowl. The spoon, when used, is to be forced between the teeth, and its bowl to be carried back until its point has reached near the root of the tongue. The fluid to be administered is then poured through the hollow handle, from the mouth of a coffee-pot or pitcher; and the patient is compelled to swallow, as the fluid reaches the portion of the pharynx controlled by the reflex system of nerves.

Having put himself in the possession of those means for the thorough accomplishment of his plan of treatment, it becomes the physician's duty to form his plans, secure in the conviction of his ability to execute. In speaking of the *therapeutics*, the question of blood-letting at once presents itself. *There is hardly any form of insanity in which bleeding is admissible.* In every case in which it has been employed within the writer's knowledge, it has proved highly injurious; and, in one case, perhaps utterly destroyed the hope of cure, which might otherwise have been cherished. If a strong, plethoric, and physically healthy man becomes the subject of acute mania, if the head is hot, eyes injected, and face flushed, pulse full and strong, and at the same time if the patient is violent and noisy, the physician would naturally be tempted to a trial of general blood-letting. Let him on no account yield to his inclination. The voice of the specialists in this department is raised strongly in opposition to such a course, and

nothing but evil has resulted from this manner of treatment in the cases observed.

The patient will require all his natural strength during his convalescence to avoid falling into dementia. Again, other and powerful agents are at hand to lessen the violence of the sick man, which are equally immediate in their effects, and, at the same time, conducive to a permanent cure. Of these we at once proceed to speak.

Hot and prolonged baths, with ice-water to the head, are the most serviceable means which can be used in the *suppression of the violence* of acute mania, and, at the same time, are excellent means of cure. Let the patient be placed in a bath raised to 98° or over, and while in the bath-tub, let cloths dripping with ice-water be kept constantly applied to the head, the hair on which has been cut very close to the scalp. In a few moments, perhaps it may be half an hour, the patient begins to grow calm, and perhaps will express himself pleased with his treatment, and desire its continuance. The warmth of the bath is to be kept up by fresh additions of hot water, as they may be required; and the cold applications to the head must be continued without intermission. The length of time this bath is to be continued, will vary with the patient's pulse and manner. In many cases the pulse will change to nearly or quite the normal standard, before the bath should be suspended. In Germany, maniacs are not unfrequently kept in this warm bath, with cold applications to the head, for eighteen consecutive hours on following days. It is said that many patients are cured in three weeks by this means.

In the treatment of acute mania, and in chronic mania also, when the physical system has but slightly suffered, we have witnessed the most surprising effects from the use of this agent.

Patients which, without its exhibition, would have been violent, and necessarily confined in cells for weeks and months, have been so benefitted by the bath as prescribed above, as to be reasonable and responsible, trusted and trusting, after but a few applications.

Counter-irritation to the nape of the neck, from the employment of the cantharidal collodion (a most excellent invention for insane hospitals), the tartar-emetic ointment, Granville's lotion, &c., &c. are often of great service. Setons are too slow in their effects to be of much use in acute mania.

In the other forms of insanity they are sometimes highly beneficial. In the application to the scalp of irritating ointment, erysipelas is to be feared; and this plan is not often followed with us.

In cases of partial mania, however, the tartar-emetic ointment has been used over the site of the organs of Combativeness and Destruction, where these organs seemed concerned in the disease (from the form of the hallucinations and the course of the habit); and benefit has resulted in some

instances. Tartar emetic administered internally, as a means for obtaining quiet, is often successful. The mercurial purge of calomel and jalap, with one or two grains of tart. ant., is generally administered to patients when the raving mania is accompanied by a disordered stomach. It is often well to open the course of treatment with this evacuant.

In many cases, the use of such remedies as are recommended above, is by no means admissible. Anæmia is a common accompaniment to mania, and a state of the system decidedly below par is too often met with. In these cases the only, and in a great proportion of them the *efficient*, remedies are tonics and sedatives—conium and iron, in large and continued doses (after the system has been, by proper alterative medicines, prepared to respond to their action)—are used with great success. Morphine, or any preparation of opium is much used, and with marked good results. Now and then, a blister may be applied to the nape of the neck, but only for a short time; it is soon healed up. The best food is to be allowed the patient; and healthful exercise in the open air, or in an enclosed verandah, always with his attendant, is advisable.

Puerperal mania, as we have seen it, has demanded the full exhibition of tonics and sedatives. The conium and iron mentioned above are those generally employed. The same principles which govern the treatment of general are held in the management of partial mania. If the habit of the patient seem to require it, he must be treated with depressants; if the contrary, tonics and opium are specially indicated.

Opium, in partial mania, seems sometimes to act upon the brain *alteratively*. The patient is given three half-grains of morphine per diem, for weeks and months together. It is sometimes gradually increased, and after a while the hallucinations are seen to be disappearing. They finally leave the patient altogether, and the medication is gradually suspended. In partial mania, great aid is received from moral treatment, of which more hereafter.

Typhomania is to be treated in precisely the same manner as typhus fever, in many respects. Morphine is, however, to be used in this form of disease, to lessen the extreme violence. Brandy and milk, beef tea, &c. &c., are always to be exhibited; and the full use of tonics must be employed during the convalescence.

In *melancholia*, the treatment must be different in the two forms. When the disease is the result of exaggerated affection, the influences brought to bear upon it are chiefly moral.

The exhibition of morphine as an alterative in this form, however, is often of the greatest benefit. Its effects upon the physical system in producing quiet, and in removing that state generally known by the term nervousness, are very evident. Its influence upon the mind in producing

oftentimes an entire change in the current of ideas, is well known. In place of sombre and mournful thoughts, the mind of the patient, through the faculty of imagination, is led to contemplate beautiful visions, and gradually induced to prefer them as subjects of thought. His grief is forgotten amid the realms of ideal beauty through which he wanders; and, no longer constant to the object of his sadness, the patient becomes more cheerful, and, many times, gradually recovers.

In melancholia incident upon physical disease, the treatment must be directed toward the removal of this cause. It then differs, of course, as the cause; but if the case admits of the use of morphine, its administration will be serviceable, from its mental effects. Occasional purges are indicated by the state of the bowels.

In *dementia* the course of treatment also includes many appeals to the "morale" of the patient. The chief medication is found in the means best calculated to establish the general health. As may be inferred, the marked atonicity of the reflex system, almost always present, demands attention. The different preparations of nux vomica, in small but long-continued doses, the cannabis indica in a few instances, iron, cinchona, the vegetable tonics and stimulants, are not to be omitted.

Setons, in the nape of the neck, which shall be kept open for weeks and months, are, in this form of insanity, of more use than in any other. They act in two ways. They form an object upon which the attention of the patient is often fixed (which is not to be slightly estimated in dementia), and, at the same time, they act as a continued slight counter-irritation to the encephalon. The drain from the system established by them, if supplied with the materials for good blood, is of marked service, from its indirect alterative effect.

Morphine is rarely used in dementia, the lack of its indication is at once perceived. The system is already sufficiently sluggish. Mercurials are sometimes indicated, as well as iodine also.

*Moral insanity* may, perhaps, be sometimes treated with antimony, if the system is in such a state as to admit of its use. If employed, it should be continued for a moderate length of time, to allow a complete manifestation of its effects. Morphine, as an antidote to the psychical agitation, has been, in some cases, followed by improvement.

By furnishing, through its effects on the cerebrum, new food for thought, it may remove the morbid tendency to waste the energies upon falsehood and wickedness. In this form of derangement, as has been said above, there are no *bona fide* hallucinations.

The moral faculties are alone involved, and counter-irritation, employed with this view, may, perhaps, influence the disease. Constant occupation, travelling, manual labor, and radical change in the daily associations of the

patient, must result in benefit. Toward one affected with *moral mania*, the bearing of the physician should be that of a calm, high, censor of his actions.

When the effort at self-control is not attempted, the deprivation of usual privileges should be used as a means of punishment, until the effort is plainly made. It is to be remembered that in this form of insanity, the intellectual faculties being unimpaired, the patient can sometimes be reached through them.

Before leaving the subject of medical treatment, distinct reference should be made to the use of *etherization*. Dr. Ray, of the Butler Hospital, at Providence, has lately read a paper upon this subject, before the convention of Medical Superintendents of Lunatic Asylums, in which he highly commends its employment. We are beginning to exhibit it, and hope for good results. After the patient is, in some degree, under the influence of opium, ether will often change the drowsy stupor attending the full dose of this drug into sound and apparently healthy sleep. A good night's rest, obtained night after night, by these, or any other means, cannot but benefit the patient extremely.

*Suicidal cases*, always the objects of unceasing care, but, particularly to be watched during the hours of darkness, are to receive great benefit from this new form of treatment. They are quietly sleeping, with, perhaps, happy dreams (when under the combined influence of opium and ether), during the period in which the attempt at self-destruction is most to be feared. Night after night of unbroken sleep changes the current of their thoughts, and, with moral treatment suited to their peculiar state, their depression is oftentimes entirely removed.

Moral treatment is best conducted, in almost all instances, by persons who have not known the patient before his illness. It is on this account, as well as for the purpose of removing the patient from scenes constantly reminding him of his ordinary life and business, that the insane are generally more successfully treated in asylums. The psychologist, in his bearing toward those under his charge, may, and should, exhibit the feeling of sympathy which he has at heart for their misfortunes. He is always the same affectionate, firm, *truthful*, sympathizing friend. With quiet patience he listens to all their complaints, and by his kind manner and expressed interest (to some degree) assuages their sorrows. A subdued earnestness, with evident intensity of thought, and a certain deliberateness of movement and expression, seem to gain the confidence of the wandering mind in most cases.

It is a matter in some dispute if the patient is to be informed that he is considered insane. Among the Germans, it is not uncommon to do this, and the practice at Utica is also of this character; our own impressions are

greatly in favor of this plan, and we have known several instances in which a patient (under medical treatment also) has been *reasoned out* of his delusions. It is many times better *not to reason* or argue with the insane, who may think you are the insane man, rather than he; and, also, because a man who disputes with another places himself upon a level with his opponent.

If one simply states that the subject of the delusion is one on which he cannot agree with his patient; that he most fully *denies its truth*, but is *not disposed to talk* upon the matter, he will, in almost all cases, retain the patient's confidence; and, as he is considered somewhat as a superior being, his judgment is not unusually conceded to. It is hardly ever improper to inform a patient that the actions of his mind are deranged, but there are some instances when it is not necessary to refer to it. Employment is the greatest moral means possessed by the physician in the treatment of the insane. It is better that the nature of this employment should be of the character of the previous habits of the patient; but out-door occupation is by far the most serviceable. As an instance of what employment may do for even the most excited patients, I may be allowed to state that on a recent visit to the New York State Asylum, the most excited and noisy patients were found sitting in a circle round a basket, shelling green peas. They were quite busy, and hardly looked up until the presence of a stranger attracted their attention. The restoration of several lunatics to their senses by a Scotch farmer, who employed them upon his farm because they cost less than men who were not insane, was, perhaps, the first thing which attracted general attention to the use of farm-labor in the treatment of this disease. It is every day affording proofs of its great benefit, in almost every asylum in the country.

Employment at the trade of the patient, if the employment is a healthy one, is an excellent means of cure, when this moral is united with proper medical treatment. There are certain patients whose incoherence and violence are so great as seemingly to preclude the idea of any steady occupation; but unremitting perseverance on the part of the attendant will surely bring its reward, and the patient and physician will each wonder at the amount accomplished.

Amusements should hardly ever be allowed to fill the whole time of the insane. They are generally to be employed as offsets to the wholesome fatigue engendered by some useful occupation. In speaking of the *moral treatment* of special cases of lunacy (the unexpected length of this paper warns us to touch lightly upon the subject) it may be remarked, that the manner of addressing the patient must differ with the character of the person and with his special delusion. The innumerable little incidents resorted to for the purpose of drawing the attention of the demented; the many little means used to excite the cheerfulness of the melancholic; and the many

soothing influences brought to bear upon the excitement of the maniac, to produce quiet and calmness, are not to be mentioned in this place. They will suggest themselves in the treatment of the patient, from the circumstances with which he may be surrounded.

Before closing this paper, my duty would be hardly half done, did I not refer to the advantages of sending the insane to an asylum as soon as possible. The symptoms and plans of treatment which have been laid down, are for the purpose of aiding those who require such assistance in the diagnosis of the different forms, and in the treatment of the disease in those cases when circumstances will not permit of sending the patient to a public institution, and in those cases in which unavoidable delay in conveying the patient to an asylum is met with.

It will be at once perceived, that this is but a cursory view of the subject which has engaged our attention. The immense extent and exceeding interest attached to it are almost sufficient to deter one from the attempt to give any thing like a full description of the disease and its treatment; and for this reason the writer has not intended to give any thing more than the outlines of it, leaving those readers whose interest may have been excited by the perusal of this article, to fill up the measure of their wishes in the study of Esquirol, Prichard, Conolly, Haslam, Fenchtersleben, and of our countryman, Dr. Ray, of Providence, who has written the best book known on the subject, especially as applied to legal investigations.

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*Some important Observations on Aphonia arising from organic lesions.*

By HORACE GREEN, M. D.

[The following article was read before the London Medical Society (having been furnished at the request of a corresponding member of that Society), by the Secretary, at its session, in April, 1854.]

SINCE the publication of my work on "Diseases of the Air-Passages," in which are recorded several cases of aphonia,\* dependent, as it appeared to me at the time, on the presence of ulcerations of the vocal cords, I have had an opportunity of observing a large number of cases of aphonia, in many of which the alterations of structure were quite different, in their character and location, from those of the above cases. In other words, the lesions on which the aphonia depended, were not constantly lesions of the vocal cords, nor did they always occur in their immediate vicinity. As such instances are frequently to be met with, in which the changes of struc-

\* A Treatise on Diseases of the Air-Passages, &c., p. 75, *et seq.*

ture are in some degree remote from the vocal ligaments, and as the voice in these cases cannot be restored until the primary lesion is discovered and arrested, it has occurred to me that a history of some of those cases of aphonia which arise from causes not alluded to by authors, may add something to our knowledge in medical pathology.

Dr. Cullen has enumerated three species of aphonia, namely, *aphonia gutturalis*, *aphonia trachealis*, and *aphonia atonica*; and most subsequent writers have followed this division. But these varieties do not include some of the most difficult and severe forms of this symptomatic affection; for aphonia is not an idiopathic disease, but has its origin either in lesion of sensibility or lesion of structure. Under the first head are included those forms of nervous aphonia to which writers on this subject have generally alluded. In this variety, which occurs from lesions of sensibility, no organic changes whatever take place. It is the *aphonia atonica* of Dr. Good, and consists of "a total exhaustion of nervous power in the vocal organs."\* In the succeeding cases, the causes of aphonia proceeded from structural changes. They belong, therefore, to the second variety. Aphonia, under my observation, has been found to follow, or to be perpetuated by, the following changes:

1. Ulceration of the mucous membrane of the vocal ligaments.
2. Thickening of the mucous membrane of the vocal ligaments.
3. Edema of the aryteno-epiglottic folds.
4. Edema of the epiglottic cartilage.
5. Ulcerations of the fossæ at the roots of the tongue and on the sides of the aryteno-epiglottic cartilages.

1. *Aphonia from ulcerations of the mucous membrane of the vocal cords.*

It is the opinion of both Andral and Ryland, that simple ulcerations of the lining membrane of the larynx, unless they invade the vocal cords or the thyro-arytenoid muscles, cause but little change either in the power or tone of the voice. When the mucous membrane covering one of the vocal ligaments only is ulcerated, the voice is rendered raucous and hoarse. If the investing membrane of both vocal cords is affected, the voice loses its power, and is reduced to a rough whisper only.†

It has been observed by Louis and Andral, ‡ that the effects produced on the voice by ulceration of the larynx, differ materially, according to the

\* Good's Study of Medicine, article, Aphonia.

† A Treatise on the Diseases and Injuries of the Larynx and Trachea. By Fred. K. Ryland. p. 95.

‡ Clinique Médicale, Tome II., p. 208.

seat and extent of the ulceration. In fourteen patients, whose cases of laryngeal ulceration, complicated with phthisis, are recorded by M. Louis, where small, superficial ulcerations were found seated, either within the ventricles, between the arytenoid cartilages, or at the point of junction of the vocal cords, the symptoms present were, hoarseness, a marked alteration in the character of the voice, with heat and pricking pains in the larynx, followed, ultimately, by a complete extinction of all vocal sounds.

During the past five years, many cases of aphonia, consequent upon ulcerations of the mucous membrane of the vocal cords, occurring in the progress of follicular laryngitis, have come under my observation, in all of which the ulcerations have been arrested and the voice restored by topical medication, except in those cases in which the vocal ligaments had been previously destroyed by long-continued disease, or in such as were complicated with tuberculosis. It will be sufficient, by the history of a single case to illustrate this variety of aphonia, which has its origin in ulceration of the investing membrane of the vocal cords.

*Case I.* A gentleman, forty years of age, from an adjoining State, who had suffered under follicular laryngitis for two years, came to New York several months ago, for medical advice. Two years before this visit, whilst actively engaged in business, he found his voice beginning to fail. He became hoarse, and a constant feeling of uneasiness, with pain, was experienced about the throat. These symptoms, first observed early in autumn, continued to increase in severity during the subsequent winter and spring, attended with debility and great nervous irritability, until May following, when he became completely aphonic. Obligated to relinquish his business on account of his feebleness, he passed fourteen months after the loss of his voice, before I saw him, in the employment of different measures for the recovery of his health. But failing in all these efforts, he came to this city for aid. His condition, on examination, was found to be the following: He was much debilitated, with a feeble pulse, and his voice reduced to the lowest whisper; he complained of pain in the larynx and under the sternal bone, and of a sense of uneasiness and constriction in the upper part of the throat. The mucous membrane lining the pharynx was covered with enlarged follicles, some of which were ulcerated; the tonsils were slightly enlarged, and the epiglottis much thickened, and its upper border serrated by ulcerations. This condition of the mucous membrane, as far as it could be seen, the pain and soreness in the larynx, the loss of voice, and other symptoms present, indicated ulcerations of the involving membrane of the vocal ligaments. This opinion was confirmed by the difficulties encountered in the first attempts to pass the sponge probang through the rima glottidis.

A strong solution of the argent. nitrat. (two scruples to the oz.) was applied to the fauces and pharyngeal membrane. The second day, the application was carried down to the epiglottis, and to the opening of the glottis; and on the third day, the vocal cords were reached, and fully cauterized. This last application caused much irritation, and for a short time severe pain directly in the larynx. This I have always found to be the case when a strong solution of the nitrate of silver is for the first time applied to ulcerations of the vocal cords. Subsequently, this pain diminishes on each application, and very soon ceases altogether. Ferruginous tonics, with other appropriate general treatment, were employed; and the topical remedy was continued daily for a week, when the ulcerations about the mucous membrane of the pharynx were found to have healed; and about the same time the soreness and irritation in the laryngeal cavity, and the pain under the sternum had entirely disappeared. In two weeks from the time when the local remedy was first employed, the voice of the patient returned, and vocalization in the course of a few days was fully and permanently established.

That the aphonia, in the above case, had its origin in an ulcerated condition of the mucous membrane of the vocal cords, was inferred from the presence of the symptoms which have been enumerated; from the fact that the sponge containing the caustic fluid, at the moment of passing the rimaglottidis (the space between the vocal ligaments), produced at this point a distinct painful sensation, as when an ulcerated surface of the mucous membrane is touched with the argentine solution; and also from another fact, which, when existing, reveals to the experienced operator, with much certainty, the presence of ulcerations of the mucous membrane in the cavity of the larynx. I refer to the fact, that when the sponge-probang is applied to an inflamed or thickened mucous membrane it glides smoothly over the part, as if passing over the surface of moistened glass; but when ulcerations of the membrane exist within the larynx, a distinct sensation of roughness is conveyed to the hand of the operator when the instrument is introduced into this cavity; and this sensation will continue, but diminishing as the ulcers heal, until the membrane is restored to its normal condition.

Several years ago, I had an opportunity of treating a gentleman in this city, who had labored many years under chronic laryngitis, or "laryngeal phthisis." All the symptoms of ulceration of the larynx were present, and when the cauterizations were made into the larynx this sensation of roughness of the lining membrane was very apparent. It diminished as the applications were continued, as did the unfavorable symptoms which attended this condition.

Some years afterwards, I had an opportunity of examining the larynx of this patient (who died of another disease), and found the mucous mem-

brane of the ventricles and of the larynx covered with the cicatrices of old ulcerations, but which were quite healed. This morbid specimen I have still in my possession.

2. *Aphonia, from a thickening of the mucous membrane of the vocal cords.*

This lesion is of more frequent occurrence, I am confident, than is generally admitted. Many of those supposed cases of atonic aphonia where the loss of voice has been attributed to lesions of sensibility, have proceeded, I believe, from a slow hypertrophy or thickening of the investing membrane, and of the follicles of the vocal cords. It has been shown by Rokitsansky, that not only hypertrophy of the mucous membrane of the air-passages may occur, but that the follicles of the larynx and trachea are frequently found in this condition. When this altered state of the lining membrane of the air-tubes is moderately developed, it presents the ordinary characteristics of hypertrophy of mucous membranes; but in a higher degree, Rokitsansky remarks, "it especially affects the mucous glands, and in the larynx gives rise to glandular swellings of the mucous membrane, at those parts where the glands are most abundant, as for instance, on the vocal cords, in the ventricles, over the transverse muscles, and on the epiglottis."\*

This variety of aphonia is generally complicated with, or the result of chronic follicular inflammation. Some ten cases of the disease originating in these changes of structure have come under my observation within the last few years. Most of these cases have occurred in females, and in a large proportion of them the disease had been considered as dependent upon impaired sensibility of the laryngeal nerves. You will recall one or two of these cases which were under treatment last fall, one of which was present when I had the honor of a visit from Dr. Marshall Hall, whose skepticism at this time, with regard to the medication of the windpipe, was somewhat dissipated by seeing the sponge-probang passed repeatedly into the trachea of some of the patients then present.

The history of this last case, which both of you, I believe, had an opportunity of seeing, will illustrate that change of structure of the vocal organs on which depends this most obstinate form of aphonia.

*Case II.*—Miss B., aged twenty-six, consulted me, December, 1852. At this time she had not spoken aloud for fourteen months. Six years before,

\* *Manual of Pathological Anatomy*, by Carl Rokitsansky, M. D., vol. IV. p. 13, Sydenham edition.

in the spring of 1846, she took a hard cold, which was followed by a severe cough, sore throat, pain in her side, &c., for which she was treated by her family physician. She passed the following summer in the country, and was improved in her health; but in the succeeding winter the cough, pain in the chest, and irritation of the throat returned. In the summer of 1847 she was again in the country, by which her health was again improved. The return of the cold season of 1848 brought back all her unfavorable symptoms; and, although relieved as at former times by the recurrence of the warm season, yet cold or damp, and cold weather, invariably aggravated the disease. In the summer of 1849, after a slight exposure, she contracted a cold, and for three or four weeks was very ill. The thoracic symptoms were urgent; pain in the chest, severe cough and fever, for which active treatment was employed. After this attack she was more feeble than ever, and during the winter of 1850 her cough and other pulmonary symptoms were more persistent and severe than at any former period. But in the succeeding spring and summer a change of climate, as in former seasons, was resorted to, which was again followed with some degree of relief. Throughout this year she was attended by two intelligent physicians, who, together with a distinguished auscultator of this city, by whom her chest was examined, considered her case and treated it as one of confirmed phthisis. From November to May, 1851, Miss B. was not able to leave her house. During several months of this year she was affected with a chronic diarrhoea, by which she was greatly prostrated. Her voice, which had been hoarse for a long period, grew gradually weaker until October, 1851, when it became permanently extinguished. In this condition she remained, with but little change in her general symptoms, except some slight mitigation of them during summer weather, until the 25th of December, 1852, when at the request of her attending physician I saw her for the first time.

Miss B. was quite feeble, emaciated, and had a pale, anxious countenance: a cough, with muco-purulent expectoration, was present. The respiration was hurried, and rendered more difficult on making the least exertion; and the voice was reduced to the lowest whisper. In the throat, the follicles of the pharyngeal membrane were enlarged and indurated, both tonsils were partly destroyed by disease, the epiglottis was twice its natural thickness and had a pale aspect. The arytenoid cartilages, examined by touch, were not cedematous. On examining the chest, the respiration was found weak in the upper portions of both lungs, with bronchial respiration. There was also slight dullness on percussion under the left clavicle. A few applications of the nitrate of silver had been made, by her attending physician, to the pharynx; and it was proposed to carry these applications

at once, into the larynx; and a teaspoonful night and morning of the following preparation was ordered,—

R. Potass. iodid., ʒ ij.,  
Proto. iodid. hydrarg., gr. ij.,  
Tinct. columbæ,  
Syr. sarsa. co. aa. f ʒ ij.

and on the second day the attempt was made to pass the instrument through the rima-glottidis, but the space between the vocal cords proper was found to be too narrow for the passage of a sponge-probang of the smallest size. After continuing the applications, however, for several days, a small sponge was passed through the rima; and this application was continued every second day through the month of January. At the end of six weeks from the commencement of the local treatment, the general health of the patient had somewhat improved; but the voice was unchanged, except that the whisper, which at first was not above the ordinary respiration, was a little increased in volume; but by no exertion could the patient utter a word above the whisper. It was observed, moreover, that a larger instrument could be passed through the rima-glottidis than at first. Yet, still, the thickened and unyielding nature of the vocal cords could be distinctly felt, as the sponge passed between them. This local treatment was continued, though at longer intervals, through the months of February, March, and April, combined with appropriate constitutional remedies. In May, Miss B. was absent from the city a part of the time, and only a few applications of the caustic were made during this period. In July, the topical treatment was renewed, and with a confident hope of success; for, although the aphonia had been unusually persistent, yet it was found that the induration and thickening about the vocal ligaments continued steadily, though very slowly, to diminish; and along with this local improvement, the cough, and other unfavorable, general symptoms, had greatly diminished. At this time, too, a sponge, more than double the size of the one first employed, could be passed readily through the rima-glottidis. Inhalations of creasote were occasionally employed, and the applications of nitrate of silver continued until the 18th July, when, for the first time for a period of twenty-one months, Miss B. spoke aloud.

Her voice, at first, was feeble, but it rapidly increased in strength and volume; and vocalization, in a few weeks more, was fully restored. A change equally favorable occurred with respect to her general health: as the local symptoms improved, the cough, pain in the chest, and other indications of thoracic disease, diminished. She improved in strength and flesh, and has now (Feb. 1854) passed a period of eighteen months, since the recovery of her voice, in the enjoyment of excellent health.

In this case of Miss B., the disease proved the most obstinate of any case of the kind I have ever treated. I have had several instances of this form of aphonia come under my notice, in none of which was so long a course of treatment required.

In the case of a lady from Massachusetts<sup>f</sup>, who had been for five years perfectly aphonic, the voice was fully restored by the employment of the local treatment for six weeks. In another instance, a patient from Connecticut, voiceless for more than three years, was perfectly restored in as many weeks.

In all these instances, symptoms, more or less marked, of thoracic disease, were present; and it has been a matter of great interest to myself and others to observe in these cases, how constantly the pulmonary symptoms have disappeared, as the causes of the local irritation have diminished.

### 3. *Aphonia from œdema of the aryteno-epiglottic folds.*

That form of inflammation which occasionally attacks the superior aperture of the larynx, and which is termed œdema of the glottis, is characterized, anatomically, by an infiltration of the sub-mucous areolar tissue of the aryteno-epiglottic cartilages; and whether the disease is idiopathic or secondary, it is always attended by entire loss of voice. The aphonia consequent upon this morphological change, does not exist in consequence of any alteration of structure about the vocal cords, for infiltration is here prevented by a very beautiful arrangement. Over these ligaments the mucous membrane is thin and adherent, having no sub-mucous areolar tissue interposed between the vocal cords proper and their lining membrane.

The loss of voice, in this affection, proceeds from the almost complete closure of the opening of the glottis, and the œdema of the arytenoid cartilages; and, also, from the morbid impression produced on the laryngeal nerves by the disease located in their immediate vicinity. In a small work, published by me some months ago, on "Polypi of the Larynx and Œdema of the Glottis," I have given several cases of œdema-glottidis, in all of which the voice was completely lost. But there occasionally occurs an intumescence of the aryteno-epiglottic folds, of a character less intense than that of true œdema. It accompanies catarrhal inflammations of a sub-acute character, and consists in an infiltration of the sub-mucous areolar tissue of the above folds, and is frequently attended with aphonia as in true œdema of the glottis.

The following case will illustrate this variety: Sept. 1, 1852; J. C. F., a young gentleman, æt. 25, came up from his residence, on Staten Island, this morning, to consult me in regard to the loss of his voice. Several weeks ago, Mr. F. took "a slight cold," to which, at first, he gave but little attention. Some degree of fever, with cough and expectoration, were pres-

ent, and his voice, which was hoarse from the first, continued to lose its power until, on rising one morning two weeks before I saw him, he found himself quite incapable of uttering a sound aloud. His physician, finding the fauces and posterior wall of the pharynx inflamed, applied daily a solution of iodine to these parts, and administered an emetic, followed by expectorant remedies. These and similar measures, constituted the treatment before I saw him. The aphonia, at this time, was complete. A cough, with considerable expectoration, which appeared to come from the throat and upper part of the windpipe, was present. The patient suffered also from dyspnœa, which was much increased by the least exertion. The dyspnœa was characterized by that peculiarity which, more or less, attends all cases of œdema, when located at the aperture of the glottis; that is, the act of inspiration occurs with much difficulty, whilst expiration is performed without obstruction.

On examining the throat of the patient, this condition, indicated by the above symptom, was found as anticipated. By pressing the finger over the laryngeal face of the epiglottis, a small soft tumor was readily detected, occupying each lateral border of the glottis. Having learned, from past experience, that infiltrations of the opening of the windpipe are rapidly removed (as I have shown in my work on œdema glottidis) by applications to the parts of a concentrated solution of nitrate of silver, I immediately applied this remedy, by means of the ordinary sponge-probang, freely to the injected borders of the glottis. The applications were repeated daily, and the iodide of potassium was administered internally. Under this treatment the œdema rapidly diminished.

As the intumescence subsided, the dyspnœa, cough, and expectoration, diminished; and at the end of a week the patient could speak aloud. The local treatment was continued for another week, when all the unfavorable symptoms had disappeared, and the voice was restored to its normal condition.

As I have before stated, this cedematous condition of the aryteno-epiglottic folds is the frequent concomitant of catarrhal inflammations. The aphonia consequent upon it will sometimes remain for months under ordinary treatment, before the infiltration is sufficiently removed to allow vocalization to be performed. Besides, the swelling acting as a local irritant, at the opening of the air-passages, is very likely to awaken more serious organic disease, particularly in constitutions predisposed to tuberculosis. It is, therefore, of the utmost importance to detect this lesion in its earliest stage; and it may be discovered readily by the touch, as well as by the characteristic respiration. Once detected, it is most certainly and rapidly removed by the topical medication.

#### 4. *Aphonia from œdema of the epiglottic cartilage.*

Edema of the epiglottis is an alteration of structure of more frequent occurrence than the lesion of the aryteno-epiglottic folds, to which I have just referred. It proceeds from the same cause, namely, catarrhal inflammation, and consists in an infiltration of the sub-mucous areolar tissue of the epiglottis. The infiltration occurs on the lingual side of the cartilage, because of the great amount of areolar tissue on its anterior face. This causes the epiglottis to assume a very anomalous aspect; its edges are rolled back and approximated, and when the intumescence is considerable, it presents much the appearance of a round tumor at the base of the tongue. That variety of aphonia consequent on this lesion of the epiglottis, is frequently observed in epidemic catarrhs. During the prevalence of an influenza that occurred, to some extent, in New York, in the winter of 1853, I observed many cases of total loss of voice from this cause. Even within the present month (Feb. 1854), during the cold and unusually damp weather which has occurred, some four or five patients, laboring under this form of aphonia, have presented themselves at my office for medical treatment. I will give a single instance of this form of the disease, arising from œdema of the epiglottis.

*Case IV.* A young gentleman, who, three weeks before, had had an attack of the prevailing epidemic, called on me, January 29, 1853. The disease, in its early stage, was attended by a total loss of voice; and it was in reference to this voiceless condition that my opinion was desired. Some degree of cough was present, attended with slight expectoration, but the respiration was but little affected. On depressing the tongue of the patient, the epiglottis was readily brought into view, and it certainly presented that very anomalous aspect to which I have alluded.

Extensive infiltration having taken place in the sub-mucous tissue on its anterior face, the cartilage was enormously enlarged, its lateral edges were turned backwards and approximated, and its whole appearance was that of a round, puffy tumor, lying at the opening of the glottis. Examining, with the finger, for the arytenoid cartilages, they were found to be not involved in the œdematous infiltration; and this exemption from the disease, in this location, accounted at once for the slight degree of difficulty presented in the respiration of the patient.

To procure a reabsorption of the infiltrated serum, a strong solution of nit. argent. was applied freely to the epiglottis, and to the whole faucial region. A profuse expectoration of adhesive mucus, from these parts, followed the application. The topical remedy was continued daily, for ten days. Under its use the tumefied epiglottis diminished constantly; and at the end of a week, the patient could speak aloud, although his voice had a

muffled sound. Continuing the applications a few days longer, the epiglottis, at the end of this time, was found reduced to its normal size, and the patient's voice and general health were fully restored.

That the loss of voice, in this case, as well as in many similar cases which have been observed, depended on the intumescence of the epiglottis, has been proved repeatedly by the fact, that when the epiglottis has been thus œdematous, voicelessness in most cases has been present; and, also, by the other fact, that the voice in some of these cases returned after the œdema of the cartilage had been removed.

5. *Aphonia arising from ulcerations of the mucous membrane of the fossæ which are situated between the columns of the palatine arch, but at their base, and external to the arytenoid cartilages.*

It has long seemed to me that the very great frequency with which ulcerations are found to exist in the lateral fossæ at the base of the tongue, and the equally important truth that very serious consequences not unfrequently follow their long continuance in these locations, are facts far from being generally known or appreciated by the profession. In connection with long-continued follicular disease of the throat, these ulcers are of every-day occurrence; and they not only affect vocalization, but, through constant irritation, kept up by their presence near the opening of the air-tubes, they awaken, quite frequently, more serious disease in the pulmonary organs. But, at present, I have only to speak of that variety of aphonia which is caused, occasionally, by these lesions.

Ulcerations of the thyro-arytenoid mucous folds may exist without inducing, necessarily, a loss of voice. When one fossa only is involved in the change of structure, vocalization is not ordinarily interfered with to any considerable extent. But, when both fossæ are ulcerated, the voice soon becomes hoarse and uneven, and is followed, at length, in some cases, by total aphonia. During the past ten years, I have observed many such instances of the disease; several cases have occurred, within a few months, in my practice. One of these, that of a gentleman from Kentucky, you will recollect having noticed. I will therefore illustrate this variety of aphonia by reference to his case.

Case V. This patient first called to consult me in October, 1853. He had then been for several months voiceless; and for twelve months, or over, he had suffered from chronic ulceration of the throat; for which, general treatment, with the use of astringent gargles, had been employed by his attending physicians, one of whom recommended him to visit New York and consult me. On examining the patient's throat, the pharyngeal mucous membrane was found thickened, and ulcerated at many points. Be-

tween the anterior and posterior columns of the palatine arch, on depressing the tongue, a large and deep ulcer was observed on either side, commencing at the base of the tonsillary gland, and extending down into the fossa as far as the eye could see. The epiglottis and the arytenoid cartilages were in a normal condition. An abundant muco-purulent secretion was being constantly hawked up from these parts.

There was difficulty of deglutition; but no cough existed, nor were there any other indications of disease within the larynx; still, this gentleman had been aphonic for several months. His general health had suffered from the local disease; for he was feeble, pale, and emaciated, exhibiting, in short, many of the external or rational signs of phthisis. But auscultation failed to discover any abnormal state of the lungs. With a small sponge-probang, the lingual fossæ were cauterized with a strong argentine solution (80 grs. to  $\mathfrak{z}$  i.), and a drachm of the following mixture ordered to be taken twice daily:—

R Potass. iodid.,  $\mathfrak{z}$  ij.  
Proto-iodid. hydrarg., gr. ij.  
Tinct. columbæ.  
Syr. sarsæ, co., aa f.  $\mathfrak{z}$  ij.

M.

The cauterizations were repeated daily, until the 13th, when the ulcerated fossæ were nearly healed, and the patient could speak at this time in a loud, although a hoarse voice. After this he improved rapidly; the expectoration diminished, the difficulty of deglutition was gone, and in the course of another week, the patient had gained several pounds of flesh. He was able to converse with a voice as loud and clear as at any period of his life; and he left for his home with the intention, as he declared, of "stumping it for Congress" on his arrival in his district, in Kentucky.

That the loss of voice in this case, as well as in many similar instances which have come under my observation, depended upon the above lesions of the fossæ, may be fairly inferred from the results of the treatment. As no disease existed within the larynx, the applications were not made to the vocal cords, but external to the opening of the glottis, where the ulcerations were located. When these were healed, and not till then, vocalization and, ultimately, the general health of the patient were fully restored.

These lesions, on which depend this last variety of aphonia, are, I repeat, of very frequent occurrence, and are very frequently overlooked. Within a few days, since I commenced drawing up this paper, I have had an opportunity of seeing, in consultation with our distinguished friend, Dr. Valentine Mott, an interesting case of aphonia having its origin in ulcerations of the above fossæ. The disease, in this instance, had been of twelve months' standing; the lesions during this time remaining undetected, whilst

constitutional remedies had been addressed, by the patient's medical attendant, to the general symptoms, which, although of a grave character, were only secondary, and of course remained unrelieved by the treatment.

Aphonia, then, I do not hesitate to declare, will be found to originate, at one time or another, in each and all of these structural changes, to which allusion has been made. Some of these lesions, I am aware, may exist without, in all cases, inducing aphonia; but I have the records, and could give you the history if necessary, of a large number of cases which have followed each of the pathological conditions. Some of these cases, as well as their treatment, you have observed; and many of them, you are aware, have been seen at my office, from time to time, by medical men from almost every part of the Union.

It will be unnecessary to enter into any details with regard to the treatment to be employed in the management of these different forms of aphonia. Whether the alterations of structure, on which the disease depends, consist in œdema of the parts, in ulcerations of the mucous membrane or its follicles, or in a thickening of the investing membrane of the *cordæ vocales*,—topical medication in the form of a concentrated solution of the crystalized nitrate of silver, has proved in my hands to be altogether the most effectual remedy that has yet been adopted. Constitutional remedies, when indicated, are to be employed, as in other cases where local disease is found complicated with general derangement. The different preparations of iodine, chalybeates, and other tonics, with the inhalation of creasote, are valuable adjuncts; but without topical medication, these latter measures are ordinarily of no avail.

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## PART II.—REVIEWS AND BIBLIOGRAPHY.

*Homœopathy; its Tenets and Tendencies, Theoretical, Theological, and Therapeutical.* By JAMES Y. SIMPSON, M. D., Professor of Midwifery, University of Edinburgh, &c., &c. First American, from the third Edinburgh edition. Philadelphia: Lindsay & Blakiston, 1854; 8vo., pp. 304.

*Homœopathy Fairly Represented. A Reply to Professor Simpson's "Homœopathy" Misrepresented.* By WILLIAM HENDERSON, M. D., Professor of General Pathology in the University of Edinburgh. First American, from the last Edinburgh edition. Philadelphia: Lindsay & Blakiston, 1854; 8vo., pp. 285.

THE receipt of these works, sent to us some time ago by the publishers, was duly acknowledged on their arrival; and, instigated thereby to a

notice of their contents, we have delayed publishing what was written of the one, until we could afford time to peruse and jot down what we thought of the other, and also to secure space sufficient to place side by side our sentiments on what *we* regard as two of the most remarkable and peculiarly interesting publications that have issued from the medical press for some time, even in this age prolific with theoretical dogmatism. Nor are we alone in thus estimating these volumes. They have attracted the attention of *literateurs* within and without the pale of scientific medicine. They have afforded abundant material for assault and defence, to the numerous critics who have reviewed their individual and comparative excellencies and demerits; they have provided, we have not the least doubt, the disciples of rational medicine and Hahnemann, with many wanted facts, statements, and arguments. It must be confessed, that in the zeal of controversy these systems respectively have, occasionally, been lost sight of, the authors have become the source of argumentative comparison, personal justification or recrimination, and their names adopted as party watchwords.

SIMPSON and HENDERSON have thus been constituted the representative types, as it were, of antithetical principles. Nor are such results without their use and value, especially to those who desire to form a judgment upon the books, and the great question treated of in their pages; a judgment which, being just to their literary merits, shall at the same time embrace a consideration of every point connected with their bearing upon the general interests and progress of medical knowledge and truth.

It will not be unprofitable, therefore, to consider, for a brief space before entering upon the examination of the volumes, who, what manner and fashion of men, the authors are; the circumstances which have given rise to these controversial works; the time at which they have appeared; and, lastly, the influence which they will probably exercise on the formation of public opinion, the regulation of professional conduct, and the destiny or future position of medicine in the scale of sciences.

Everyone who reads the title-pages of these books, learns that they have been written by colleagues in a university which for very many years has maintained the first position as a school of medicine,—a position which, as an alumnus, it is our pride to boast, our privilege to hope, will long be enjoyed by our *Alma Mater*. With such sentiments of veneration for the institution is mingled a feeling of regret that any heretical doctrine should be permitted, even for a short season, to cast a shadow on the lustre of her name.

During pupillage, and subsequently, while juniors in the profession, and in some measure *attachés* of the University, both these gentlemen were well known by their contemporaries as ardent and zealous students; both signalized themselves in the several societies which prosper under the fos-

tering countenance of the colleges, were favorite clinical assistants in the infirmaries and other charitable institutions of the city, and gave promise of a future career of honorable usefulness in the ranks of the profession. Our own impressions at the time, founded on an insufficient basis it is true, but one most likely to mislead the immature judgment—we allude to the effect produced by mere personal appearance and manner—were, certainly, more in favor of the greater probability of a brilliant career for Dr. Henderson than his colleague. Not that we failed to appreciate, at that time even, the stern, dogged, unwavering perseverance of the latter, combined with a singular facility in methodizing his labor, and the comprehensive grasp of his intellectual powers. Still, there was a finish and apparent ease of accomplishment in the former, which rendered all his efforts at once successful and pleasing to witness. Both sought the advantage of intercourse with the continental schools; and here, we have no doubt, was brought to pass that moulding of the judgment and formation of opinion, which have, in latter years, so signally marked the career, illustrated the character and genius, and regulated the fame of both. We should have presupposed, even if deprived of the advantage, since gained, of noting the course of both, that the resolute and solid mind of the Professor of Midwifery would be uninfluenced by all the glitter of foreign mysticism and theory, at the same time that it garnered the gems of knowledge confessedly abounding in their records and literature; and that his energy and industry would be stimulated and encouraged, by witnessing the laborious research and painstaking investigations, particularly of the German savans; while, on the other hand, we were prepared to find the quick apprehension and active ideality of his colleague captivated and inoculated by the transcendentalism and fecund hypotheticism by which he would be surrounded and attracted. They are both good scholars, great readers, and both think much, but evidently not equally well. The one analyzes and selects; the other absorbs and adopts.

For some time previous to the death of Dr. Hamilton, the former Professor of Midwifery, Dr. Simpson was efficiently engaged as his assistant, and, on the occurrence of the vacancy, was, to the entire approbation of the profession, selected to fill the chair; a position which he has adorned, by a boldness of practice, an originality of opinion, and a brilliancy of achievement in the therapeutics and surgery of his department, that have, by common consent, placed him foremost in the rank of obstetricians. While thus profitably engaged in the prosecution of his speciality, he has, moreover, found time to employ his faculties and powers in the correlative branches of medical science. And one among other fruits of this zeal, is the sound, argumentative, and logically conclusive treatise under review.

The chair of General Pathology was, it is believed, specially erected for the occupancy of Dr. John Thompson, whose reputation at that time was

most deservedly celebrated. To have succeeded such a teacher in so prominent a chair, was undoubtedly no insignificant honor. The prestige of such an appointment, while it naturally raised high expectations as to the efficiency of the new occupant, as naturally exposed him to the jealous watchfulness of those who had the renown of the institution and the advancement of medical science at heart—some of whom, perhaps, may have evinced a spirit of hypercriticism. In perfect equity, however, it can be asserted, that since his elevation to the important post he occupies, Dr. Henderson has not exhibited to the world any evidence by which one can arrive at the conclusion, that he is to be placed in the same category, as an authority in scientific and rational medicine, with either his predecessor or his colleague. Of his ability or merits as a teacher we have had no opportunity of judging; but we may be permitted to express a serious doubt whether he can be relied upon in this respect, when we find him thus openly defending and upholding a system so completely opposed to all which we consider sound and true in the philosophy of medicine. If he instructs his class in the universally received orthodox principles of the science, he must do so at the sacrifice of great violence to his own convictions, and thus be unfitted for efficient and useful tuition. If, on the other hand, he uses his position for the dissemination of his peculiar views, which we really cannot bring ourselves to believe he would do, then is he guilty of a breach of faith to the power which placed him in it, and of decorum and corporate obligations to his colleagues of the medical faculty. We have been given to understand that his heretical tendency was strongly suspected at the time of his appointment; in such a case, those who then possessed the privilege of investigating the claims of the respective candidates, are to blame for admitting him to a participation in the educational prerogatives pertaining to a chair in the University. On the anomaly of his continued tenure of office, we shall have something farther to offer in our subsequent remarks.

Such are the authors of the books before us; let us now inquire into the circumstances which would seem to have given rise to their publication.

Fifteen or twenty years ago, homœopathy was almost universally regarded as the wild and sickly dream of a disordered imagination; its propounder seeking, by its startling propositions, to build up for himself the notoriety of a discoverer, in a field more fruitful of success than the laborious and tardy progress of rational medicine afforded—human credulity. Its advocates, numerically, morally, and intellectually, were a comparative cipher—unprincipled and ignorant pretenders. With rare exceptions, they were illiterate, and but superficially acquainted with the meaning or principles of their great master, Hahnemann. Medical men seldom troubled themselves about their proceedings; never spoke of the system

they professed, but with a good-natured smile of ridicule; and, as a matter of course, never dreamed of holding professional intercourse with the charlatans, to the extent of medical consultations on the case of a third party. Matters began to alter, however, as soon as the popular mind commenced to be imbued with the *furor Hahnemannii*. Infatuated invalids began to suggest to their medical attendants that it was prejudice which blinded them to the real merits of the new light in medicine; the insinuation was not unfrequently carried a point farther—self-interest was suggested as the opposing influence to the admission of homœopaths to the rights of professional confraternity. The younger men commencing life, with a long prospective range of difficulties to encounter, the men beginning to feel somewhat more secure in a gradually increasing business, and even the well-established and confidential *family* man, encountered the hardships and inconveniences of the practical interference of these interlopers. Loss of patronage was no uncommon result of a steady refusal to admit the truth of the doctrine itself, or to participate with its practitioners the emoluments and honor of attendance and treatment.

It is no matter of surprise that some should have yielded to the force of such a combination of adverse and impelling hindrances to success. Concession to the whim, or it may be to an honest belief, of their patients, as a means of retaining their favor, was naturally succeeded by a less rigid opposition to the advances of their rivals; and with many, we fancy ourselves justified in believing that the facility of assuming the knowledge and right to pursue the novel practice, was a strong inducement to render it subservient to the purpose of obtaining business which would, under other circumstances, have passed into the hands of another, and perhaps less scrupulous pretender. *Il n'est que le premier pas qui coute*. Such, at least, we know to have been the issue on this side the Atlantic, and we imagine that no very peculiar conditions obtain among the profession on the other side to prevent a similar result. The barrier once carried, it only remained for the proselytizing zeal and acumen of the homœopaths to extend the circle of their accomplices. Nor is it to be questioned that men of intelligence and scholastic acquirements, in view of the present and tangible benefits derivable from the adoption of the new creed, devoted their energies to its cultivation; and thence homœopathy has derived much of the adornment, in a literary point of view, which it cannot be denied has carried the works published on the subject at the present day to a degree far excelling the efforts of its earlier writers. Not that the truth of its teaching has been confirmed or demonstrated, but that all the extrinsic and circumstantial details illustrative of its false principles have been multiplied and presented in a more attractive form.

From whatever cause arising, however, whether from honest convic-

tion, diplomacy, or the fear of the embarrassing results of an opposite course, it is nevertheless true that many members of the profession, regularly educated and legally qualified in Britain and America have been guilty of schism, and have both openly and covertly embraced the spurious tenets, and cultivated a reputation for the practice of homœopathy. The British colleges and medical corporations have sought by acts of exclusion and collective protocols to arrest the progress of this shameless and harmful degeneracy. An example which has been, and is daily being followed by the institutions of this country, where the disciples of homœopathy are perhaps more numerous and more completely organized than elsewhere.

Bold and earnest in the defence and propagation of truth and sound doctrine, Prof. Simpson early entered the field of controversy, and took an active part in the proceedings adopted on this subject by the Medico-Chirurgical Society of Edinburgh. Having once put his shoulder to the wheel, his untiring industry enabled him to collect the material and construct the masterly refutation of error now before us.

Emanating from such a distinguished and authoritative source, the homœopaths perceived the necessity and importance of an attempt to counteract the effect of this powerful and fatal blow. Feeling, it is fair to presume, that his reputation would only be more injuriously compromised by a farther delay in the open avowal of his conversion,—a circumstance previously well understood by the profession,—Prof. Henderson has published his Reply; thus yielding the weight and prestige of his name and position, as an offset to that of his colleague, to the promulgation of error.

If we carefully and dispassionately consider the history of current events during the last few years, in as far as the medical profession in Great Britain is concerned, we cannot avoid the conclusion that its internal government is most faulty and its external relations most unsatisfactory. The numerous factions into which it is divided, the dissensions which have arisen, the acrimony with which the discussions on the question of reform are conducted, all tend to substantiate the belief, that there are some latent, but not inactive, agencies at work sapping and undermining its integrity and well-being. One cannot be blind to the part which has been borne in this unharmonizing and disintegrating process by the restrictive prerogatives, and their somewhat monopolizing exercise, of the several corporate institutions which there exist.

The necessity of guarding safely the avenues to professional distinction and the right to practice medicine as an art, is undoubtedly most urgent; but it may be fairly questioned, whether, in the present enlightened age, this can be or is best accomplished by the jurisdiction of several distinct and to a very great extent antagonistic corporations. That the educational faculties and licensing authority should be separate and entirely independent

of each other, would seem to be essential to the complete organization of a well-regulated system; at the same time that the former might be as numerous as the requirements of the public would seem to call for, their functions should be confined to the limits of thorough teaching and the conferring of honorary degrees; while the latter should be vested in one body, representative of the whole profession in each country, in fact a national court, whose functions should extend to, and be solely engaged in the regulation of a uniform curriculum of study and qualifications, the examination of candidates, and the granting of *ad practicandum* degrees or licenses. That some such final adjustment of the differences, jealousies, and numerous plans of reform which have been suggested, and upon which an attempt is now being made to legislate in Parliament, is devoutly to be wished; and the more speedily, provided it is completely and wisely brought about, the better for the interests of medical men, and what is perhaps still more important, for the public among whom they exercise their vocation.

But although the evils arising from sectional corporations are obvious and to be regretted, we question whether their influence is more prejudicial to medicine as a profession, than the exceedingly unsatisfactory state of the legal enactments affecting the practitioner. We do not advocate a system which would exempt a medical man from the strictest scrutiny into the consequences of his practice, simply because he happens to be a duly and legally qualified licentiate; but we do maintain, that a distinction should be made, as apparent to the eye of the law as it is to that of the reason, between the man, who, being conscious of his knowledge, and being possessed of the recognized certification of his ability to undertake the treatment of disease, honestly and conscientiously devotes himself to the service of the public, and him, who knowing his own educational deficiencies and ignorance of the principles of the art he professes to practice, recklessly ventures to tamper with human life. Let the errors of judgment of the former meet their desert in a loss of business and public confidence; let his carelessness or neglect be punishable by the judicial power; and let him reap the reward of wilful misconduct to the extremest point of his criminality;—but do not permit the latter, with equal facility and with greater impunity, to prey upon a heedless, indiscriminating, and as far as a knowledge of the human body and its healthy functions and morbid actions are concerned, an ignorant public.

It seems to us that from this source, viz. the protective tendency of the laws affecting quackery, springs much of that insufficient education, of that defection from the ranks of the legitimate profession, of that constant collision between true science and charlatanism, which are so characteristic of the present day. We know that it has been often said, and we are inclined

to agree with the assertion, that it would be impossible to put down quackery by act of Parliament; that imposture in all its phases has existed through all time, assailing other departments of human knowledge as well as medicine; and that as long as human nature remains what it is, mankind will be exposed to its invasions. But we have faith enough in human progress to believe, that, although these may be truisms, there grows side by side with this all-pervading credulity, a plant as strong, and which, in each era of advancement, gathers fresh nourishment from the light of reason, and which must eventually overshadow and annihilate its antagonist—common sense, not inaptly termed by Dr. Simpson “our confession of faith, our standard.” Men acknowledge and perceive that the true wisdom of all legislation is to prevent and deter their fellow-creatures from the commission of crime, rather than to devise means of punishment for the transgressor. Precisely in this point of view do we regard the necessity which exists for such laws as will not only make it criminal to undertake the treatment of disease, as a profession or art, or, to be more explicit, as a means of livelihood and gain, without a competent knowledge previously obtained by means established and prescribed by the same authority, but which will at the same time remove the wilful encouragement of false pretenders from the protection of the jurisprudence of the country. Punish the regularly qualified man for his shortcomings and delinquencies; punish the pretender for his dishonesty and presumption; but deprive the voluntary dupe of all legal remedy against the latter for the consequences of his ignorance and chicanery, and much may be done to prevent the success of his predatory machinations.

To bring within the pale of a correct judgment the several systems, schemes and absurdly hypothetical propositions, which, from time to time, have been boldly put forward as innovations in the science and practice of medicine, may appear to be a process surrounded with great difficulty, and obnoxious to much fallacy. But the test of experience, the force of sound philosophical reasoning, and the deliberate and well-matured opinion of those who only are able to determine the question,—the enlightened, learned, and scientific physicians of all countries,—must be the rational and wholesome method and means of determining such a question. Tried by such probation, theoretically and experimentally, it is clear to us that homœopathy must be classed in the ranks of empiricism; and hence we regard the ostracism enforced by the learned societies and colleges against those members who openly avow their adherence to its tenets, or covertly put in practice its doctrines, as a wise and just proceeding, due to themselves as conservators of professional faith and honor, protective of humanity, and righteous to the public, the victims of its pretensions.

That the insidious and treasonable attempts of the disciples of this and

other equally preposterous heterodoxies, to unsettle the public mind and to sow discord among the followers of true science, are foremost among other causes which disturb the harmony of the profession, is equally manifest. We therefore regard the time chosen for the publication of Dr. Simpson's work as most opportune; and, despite the sneering allusion of Dr. Henderson, in the preface to his first edition, to the time employed in its preparation, no one who carefully reads it, with the candid desire to investigate the truth and force of his arguments, can deny that the time has been well employed, and the self-imposed duty faithfully performed. Equally timely in its appearance is the reply. The world have now the opportunity of deliberately weighing the arguments and sifting the proofs adduced on either side, by these exponents of the old and new, we would rather say, of the true and false, schools.

We will now briefly consider the propositions involved in the remaining point of interest connected with the publication of these books. And, first, with reference to the influence they will probably exercise on the formation of public opinion.

Perhaps on few matters of mere opinion is mankind so divided in its judgment, as on the propriety of answering an assailing opponent, whom we know or believe to be wrong, and whose assaults on the truth of our own convictions, or the rectitude of our actions, are unscrupulous, uncandid, and unphilosophical. It has been frequently and well said, however, that there is a point beyond which forbearance ceases to be a virtue. If this be true where only personal interests are at stake, how much more forcible the verity of the dictum when the larger claims of humanity are concerned, where the contest is not one between individual personalities, but between science and sciolism, truth and error! Viewed in this light, we must regard Professor Simpson's book as a defence of allopathy, necessarily involving an exposure of the utter emptiness and absurdity of homœopathy. Firm in his faith, stable in his opinions, he exhibits his strength by making apparent the weakness of his opponents, and this he does by submitting their crude and shallow theories to a comparison with the standard of common sense. Here is his vantage ground, and here it is the public at large will benefit by his labors. Not that, in a strictly scientific point of view, his book is deficient or not equally convincing; but with that we have at present no concern. We can readily conceive that there will be found some who will view his undertaking as emanating from motives entirely foreign to his nature, and who will stigmatize his work as a chivalrous crusade, somewhat Quixotic, against a harmless system of well-intentioned hypotheses. But, in the main, we are confident that the reflecting portion of his readers will see in his pages the strongest evidence of sound judgment, deep reflec-

tion, large experience, acute perception, logical reasoning, and candid statements, zealously employed and fearlessly published for the common good.

On the other side, we opine that the course adopted by Dr Henderson will strengthen the position of his antagonist; for, if his book contains some statements which are remarkable in their nature and bearing on his subject, and which being made in good faith, we are bound to accept as correct, and which, although they may be open to another explanation than he gives, are yet sufficiently and ingeniously illustrative of his mode and course of argument, yet the carping spirit of objectivism, the abundant employment of sarcastic raillery and satirical ridicule pervading his pages, destroy the force of his reasoning, and screen the points of his attack. His is truly a ruthless onslaught upon allopathy, a war of wit with his adversary, and is wanting in that calm, philosophic, and dignified ratiocination so well calculated to carry conviction to the intelligent, cultivated, and reflective mind. Such being our impressions, derived from a perusal of these books, with every desire to see the good in both, we cannot fear the issue. Time and sober reflection will restore the equilibrium of the public mind, for the present disturbed by the novelty, the specious garb of sophism, and the forward and pretentious advocacy, of an ephemeral fungus springing from the sturdy oak, and swelling on its bark.

But there is one fact connected with this controversy, which the discriminating public cannot overlook, and which must be productive of mingled feelings of surprise and painful regret. In a school of medicine deservedly renowned, and professedly orthodox—allopathic, if the term is more applicable and euphonious—they witness the anomalous circumstance of the occupant of one of the principal chairs, placing himself in an attitude of defiance and opposition to the rest of his colleagues; maintaining and advocating principles which they pronounce erroneous, and hostile to the true science of medicine; and, notwithstanding the significant and open action taken by them with reference to those professing the same opinions, inconsistently retaining his professorship, and obtruding himself on their counsels and fellowship. A house divided against itself cannot stand. What guarantee have the public that this is the extent of schismatic difference existing in the University? What confidence can be reposed in the institution, as a nursery of medical science and truth, when it is known that the Professor of General Pathology, whose office and function it is to demonstrate and explain to the student the morbid changes produced in the living structures by the ravages of disease, to trace the history of these phenomena, and exemplify the signs by which they may be recognized during life, in order to assist the student and practitioner in the careful and accurate formation of his diagnosis, openly declares that these morbid changes are not so much the result of the disease, if at all so, as of the treatment pur-

sued, and the medicines exhibited by allopathic practitioners? If this is not striking at the root and basis of the entire system of rational medicine, we know not the meaning of ordinary language. If Dr. Henderson does not consider it to be consistent with his character as an honorable gentleman, voluntarily to relinquish the emoluments, renown, and prerogatives of his appointment, then ought he at once to be lopped off as an offending member. He is a Judas in the faculty, and will sell and betray the association with which he is connected. We can fancy his feelings to be none of the most enviable when brought into official contact with his colleagues, towards whom he has certainly employed language by no means flattering to them, or becoming to himself or the position which he so pertinaciously and with so much effrontery retains and prostitutes. We are well aware that the nature of the endowment, the source of the patronage by which he enjoys his professorship, and the right of nomination to it, are equally removed from the control of the Faculty of Medicine, or the Senate of the University, it being one of those baneful appendages to political partizanship and power, which are the curse and ruin of all purely scholastic establishments. But surely the same power which placed him there, can remove him; and there must be in government officials and civic corporations enough of common sense, sufficient honesty of purpose and sense of decorum, to detect and appreciate the moral impropriety and glaring absurdity of retaining a teacher who, in as far as the public is concerned, is a counterfeit, who is traitorous to the implied conditions under which he must have been appointed, who is inimical to his colleagues, and who, while drawing from the public a handsome revenue, as a public teacher in a public seminary professing certain fixed principles as the fundamental basis of all sound medical doctrine, laughs these principles to scorn, and indoctrinates, or attempts to do so, those who by the regulations of the college are compelled at least to *fee* him, and to attend his lectures, with the grossest error. It matters not whether his own convictions are correct, his own professions sincere; he was not placed in the University of Edinburgh to teach homœopathy, but allopathy.

Such an example of faithlessness, instability, and perversity, cannot exist without producing a certain amount of prejudicial influence on the conduct of those who are wont to draw the elements of their professional character from their *alma mater*; and many a grievous error committed by the younger branches of the profession, if educated under such evil auspices, will be fairly chargeable to the institution. But we hope for better things, and we confidently anticipate the day when this ancient and still admirable college will be thoroughly purged of its heretical members.

Like the trying and purifying fires of the assayer, this fierce flame of discordant and impotent schism will leave the genuine metal of medical

truth to shine forth as purely and steadily as ever, even with increased brilliancy and endurance, when the adulterous alloy shall be completely destroyed. We do not apprehend that the present century will close with the spectacle of even a genuine professor of homœopathy in any institution in the civilized world. It will have passed away from the minds of all but the curious in the records of the past—its history will be read as corroborative evidence of the universality and persistence of the laws which govern psychical phenomena. We are becoming more reconciled every day to the periodic epidemical character of these delusions. Their occurrence, the characters which mark their duration and progress, the more intense the shorter, and the manner of their subsidence, all coincide with what we observe in physical diseases—the remission or intercyloid space is also well defined, and the exacerbation or recurrence tolerably regular in its period. We might extend the development of this similitude through all its details; but we have already occupied, perhaps, rather more than our fair proportion of space, and must leave the literary merits of the books themselves for a future number, contenting ourselves, for the present, with the declaration of our belief, that medical science will not eventually lose by that incubus which now retards its onward progress somewhat, although it cannot destroy its vitality. With Dr. Cowan, as quoted by Dr. Simpson, we would fully agree: "With us, as medical practitioners, the rejection of homœopathy is a question of principle, not of doses—a question of morals, and not of etiquette;" and likewise with Dr. Forbes: "In rejecting homœopathy, we are discarding what is at once false and bad, useless to the sufferer, and degrading to the physician." †

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*Clinical Lectures on Pulmonary Consumption.* By THEOPHILUS THOMPSON, M. D., F. R. S.; Fellow of the Royal College of Physicians, London; Physician to the Hospital for Consumption, and Diseases of the Chest; author of "Annals of Influenza," prepared for the Sydenham Society, etc. Philadelphia, Lindsay & Blakiston, 1854.

It is well known to the readers of the MONTHLY, that Brompton Hospital, in London, was founded especially for the treatment of consumption and diseases of the chest. This hospital is built in a suburb of the metropolis, on a dry, gravelly soil, a spot selected for its known salubrity. It is sheltered on the north and east by the city of London, and open to the south and west; the wards are lofty and of good size, the corridors are light and capacious, whilst the coldness and dampness peculiar to the atmosphere of London, and highly injurious in diseases of the respiratory organs, are corrected by a method of ventilation that affords an abundant

and constant supply of fresh air, which reaches the wards so modified as to keep them at the uniform temperature of nearly 65° in winter and summer.

To this institution, Dr. Thompson, the author of the above work, has been attached, as one of its physicians, we believe, from the time of its first establishment; and has, therefore, enjoyed peculiar advantages, which have been well improved, for observing and studying, systematically, diseases of the chest. These Clinical Lectures, which were originally delivered at Brompton Hospital, for consumption, and which contain the recorded results of the author's observations on the nature and treatment of pulmonary consumption, were first published in the *London Lancet*, for 1851. The favorable reception which they obtained exceeded the anticipations of the author, as he affirms; and, at the recommendation of some of his professional brethren, they have been incorporated in the present volume, with such modifications as further reflection has suggested to the writer.

Although Dr. Thompson, in this treatise, purposely avoids entering into an elaborate and systematic examination of the physical signs observed in thoracic disease, yet, in the introduction of his work, which is principally devoted to this subject, he has so arranged and elucidated the principal phenomena presented by auscultation, in order "to render this branch of science more simple and more readily comprehensive to the student," that practitioners, and particularly the student in auscultation, will thereby be greatly aided in the acquirement of practical knowledge in this most important method of investigating disease.

These Lectures, thirteen of which compose the present volume, are of a colloquial character, quite practical, and full of plain, good sense.

The work will prove, we believe, an important addition to our present knowledge of the indications and treatment of pulmonary disease.

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*Woman; her Diseases and Remedies. A series of letters to his class.* By CHARLES D. MEIGS, M. D., Professor of Midwifery and the Diseases of Women and Children, &c., &c., &c., &c. Third edition, revised and enlarged. Philadelphia: Blanchard & Lea, 1854. For sale by Root-back.

In a former number of this journal we reviewed the paper on "Acute and Chronic Diseases of the neck of the Uterus," in the Transactions of the American Medical Association, by Professor Meigs. We endeavored to give our readers a just estimate of its value, as "a help to clinical practice in an important and extensive department of medical and surgical treatment." With a forbearance which does not seem to have been appreciated, we con-

fined our remarks exclusively to the practical value of the paper. That we fairly expressed the general sentiment of the profession, is evident from the significant action of the Association at its recent meeting in St. Louis. From the following letter, which appears in the July number of the New Orleans Medical and Surgical Journal, it will be seen that Professor Meigs does not entertain the most exalted opinion of American Reviewers.

PROFESSOR MEIGS'S PROTOCOL\* TO CRITICS.

*Philadelphia, May 6, 1854.*

DEAR SIR:—As it is common to all men to prefer commendation rather than reproof, I could not well avoid a feeling of regret, not unmixed with surprise, on receiving your note of the 1st inst., which was marked "confidential." I regret, in the first place, that your Journal should be the medium by which I am to be assailed, and I was surprised to find that you should use it against a work of mine with which you are apparently not dissatisfied. At least, I gather from the tenor of your letter that you do not disapprove of the tract in question.

I am much obliged to you, sir, for the favorable expressions and kind wishes contained in the closing paragraph of your letter, and beg to assure you, you are quite correct in supposing that I "make a better use of 'my' time than those who read reviews of themselves after having written the best books extant." I believe there are not a few reviews of my publications that I have not read; and while it is true that I should thankfully receive and strive to improve every truly obvious suggestion in the way of emendation, I confess I have but very little concern in the opinions of angry and unreasonable or incompetent writers of criticism, some of which I have found to be beneath contempt for knowledge or temper exhibited by them.

I hope that I have not, by anyone, been charged with the indecency of praising my own writings, which have often been the subjects of very sharp comment. I know and admit that my writings have many faults; but I claim that even were I a good writer, I have been too busy a man to write with care, or with very special regard to the manner of expressing my thoughts. If I should have waited for time to write, I should never have made public a line on medical topics; and yet, as you know, I have written a good deal: perhaps I should have been a wiser man if I had never published a paragraph on medicine! and were I governed only by the opinions of these young gentlemen of our brotherhood, who *do* most of the American medical reviews, I should long ago have resolved never thereafter to open my mouth in their presence, but, holding my peace, leave them alone in their self-sufficiency.

\* The Editor is responsible for the caption to Dr. Meigs's letter. The Editor's note to Dr. M. was unnecessarily marked confidential. It communicated the isolated fact that the review was asked, not because of the reviewer's dissent, but because of the reviewer's ability. Those who turn to page 837 of the May number of the Journal will see the propriety of the note mentioned.

Dr. Meigs had not seen the review, nor did he know who the reviewer was, nor could he have been apprized of any special ground of dissent, at the time he penned his letter, as will appear in the sequel.—*Ed. of N. O. Med. and Surg. Jour.*

It is a difficult thing for a man to judge on a question of this kind. Here now are young people in New York and Virginia, and elsewhere, who review not my books only, but me, even when my books are not in the caption; and who inform the public that I cannot write English, and that what I do say is wholly unintelligible, and, worse and worse, that what I have written is "unworthy of his (my) eminent position."

I have not claimed to be in an eminent position, saving and excepting only, that I shall ever deem it a fortunate and creditable circumstance that I am sustained by my colleagues of the College, conjointly with whom I have labored as a public instructor of students of medicine, in perfect harmony and concord, for a great many years. This I presume, I may, without vanity, be allowed to regard as an enviable position, seeing that our medical brethren in the States do send to us a great number of their pupils, which is a certain mark of their confidence and respect.

I know not, then, what these young gentlemen mean by "his eminent position," unless they be pleased to refer to my writings, which nevertheless they do reprobate, and, I might say, truculently condemn and destroy—if they be, indeed, destroyed by these public spirited and most learned guardians of our sacred fane!

What would you have me to do, Dr. Dowler? Shall a man lay his hand on his mouth and his mouth in the dust, because a \* \* \* writer of squibs shall deem him unworthy of his "eminent station"?

I do think that Heaven knows I never wrote for my own sake, but for the sake of my brethren, to whom I owe an unpayable debt of thanks and grateful respect for their goodness, by me scarcely deserved. I say that I am deeply in debt to my medical countrymen for the some thousands of their students whom they have permitted to hear my public lectures, and for their approbation of my writings, most clearly expressed in the fact that they have taken 15 or 20,000 volumes of them from my booksellers, and are now asking me for others that I am preparing to send them. In fact I have just finished for the binders a new and enlarged edition of my *Letters on Woman*, which I hope may be found emended as well as augmented, for it was much abused, with the rest.

I repeat, then, what ought I to do? Am I to believe the young gentlemen, the sophomore *scollards* [?] who assail me, or may I not venture rather to rely on the seniors, my brethren, who buy 20,000 volumes of my medical tracts, and ask me for others that are forthcoming. I have too good an opinion of American doctors to think they would purchase so large a library that has in it neither English nor common sense.

As to the particular tract which you tell me is to be reviewed in your forthcoming number, I will be so weak as to confess, I should be sorry to find it a failure, not on account of the personal mortification merely, but because I have good reasons to believe it contains much sound and wholesome instruction, well fitted to aid the young and inexperienced brethren in a difficult department of clinics; wherein many, nay the majority of us, commit the most scandalous blunders, and do the most blameable malpractice.

I hope I have not the least desire to rescue the volume, however much I confide in the principles and methods which I have inculcated, from a condign condemnation. Yet I confess it is hard for me to understand how it should be, that, while supposing myself to be very intimately acquainted

with the history and bibliography of that particular subject, I should make the grave mistake of regarding the book as not only a useful but an original and novel exposition of these matters, if it should in the end prove to be not worth a rush. Assuredly, considering the place I have long occupied as a practitioner and teacher, the duty I owed to my brethren of being a man of studious habits, as well as a careful observer of diseases and results of treatment, I ought by this time to have learned something worthy of being told to others. Still, your reviewer may be a person far more variously and accurately informed than I, and so prove himself quite able to show that I have learned nothing in cases that have attracted much of my attention for many years. Let him, in that case, cut my book into shreds if he will; I shall endeavor to think no evil of him on account of his evil intent towards me, or my book rather. If he rails at us, much happiness and self-gratulation may be found in his railing. I shall endeavor to find contentment, nevertheless, and to that end perhaps I might do well to read in the Bible. In the 2d chapter of II. Book of Kings, I shall find a story concerning the prophet Elisha; he was old and well stricken in years, and so am I; he had a bald head, and so have I; he went on his way in the world, and so do I; he met angry and naughty boys, so have I; they scorned his gray hairs and hooted at his bald crown; probably they thought him unfit for his "eminent station," and they cried out upon him, "Go up thou bald head, go up thou bald head." The prophet turned and "cursed them," so do not I; and the Lord sent two she bears out of the mountain, and "they tare forty-and-two of those children that day." I am very sorry for the poor dear little Jew boys that were torn, and I hope my reviewers may keep clear of all such, and other vermin. And I even go so far in humanity as to trust, humbly, they will not feel themselves hurt by the reflection that their brethren and mine have bought some 20,000 volumes of medical works from a writer whom they so greatly disapprove.

I heartily reciprocate your kind wishes for my welfare; and, while I regret you should use your journal to do me hurt and damage, I am not the less an admirer of your talents and industry, and I rest with respectful consideration,

Your serv't,

CH. D. MEIGS.

Dr. B. Dowler, New Orleans.

P. S.—Were it not that you have marked your note to me "confidential," I would invite you to use your pleasure as to the insertion of this into a number of your Journal—not that I am desirous to defend my book against criticism, but only in the view of saying what I believe to be quite true—that I have reason to look upon my writings with less doubt as to their usefulness, on account of the undeniable fact that they have met with considerable favor at the hands of the medical public in our country. Yet, after all, perhaps your reviewer may have been pleased to say nothing that I should not be willing to agree to. In that case I should have no answer to make.

C. D. M.

"Angry and unreasonable or incompetent writers of criticism!"—"beneath contempt for knowledge or temper!"—"young gentlemen who do most of the American medical reviews!"—"a \* \* \* writer of squibs!"—"sophomore scollards!" &c., &c.

"Now, in the name of all the gods at once,  
Upon what meat doth this, our Caesar, feed,  
That he is grown so great!"

Young gentlemen of our brotherhood who do most of the American medical reviews, lay your hands on your mouths, and your mouths in the dust. It is gratifying to know that the learned doctor does not curse such naughty young gentlemen, else we might fear that the blank in a phrase quoted was filled with an expletive. Dr. Meigs finds it hard to understand how he, who is "so very intimately acquainted with the history and bibliography" of acute and chronic diseases of the cervix, should have fallen into the "grave mistake of regarding the book as not only a useful but an original and novel exposition of these matters." We believe other authors have sometimes made similar mistakes. We trust that we have in some measure aided to free his mind from such a delusion. We congratulate the doctor on the fact, four times announced in this letter, that his writings have proved so saleable. If the public go on "asking for others," the number of volumes sold may soon equal those of the *soi-disant* Drs. Fitch and Beach. This would be at least quadruple the present number claimed by Dr. M., and if managed with the financial shrewdness which is supposed to have been evinced in the publication of the work on "Acute and Chronic Diseases of the Neck of the Uterus," it will doubtless add much to his solid comfort, and fully justify him in announcing the number of volumes sold eight times in his next scoring of young gentlemen who do the American medical reviews.

Our admiration of the genius, our appreciation of the real worth, and our respect for the "bald crown" of Prof. Meigs, prevent us from giving some extracts from a notice of "Woman, her Diseases and Remedies," by the "naughty boy" of the *New Orleans Medical and Surgical Journal*, who evidently has no fears of she-bears or other vermin. We do not know that we need to add any thing to the commendation of this work contained in the protocol above quoted—excepting that the publishers have furnished for the volume a handsome paper and good type.

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WE are constantly receiving books and pamphlets, which we endeavor to acknowledge at once, and to review at an early day. It is not, however, always possible for us to do justice to books, and to speak of all we should be glad to mention. Simply "book notices," as they are termed, in which a constant formulæ of commendation is adopted for all publications, we do not think useful or desirable. Our reviewers are diligent, but we have not sufficient room for all that is prepared for the MONTHLY. We therefore crave the indulgence of all who favor us with their publications, and assure them we will do the best we can.

### PART III.—CHRONICLE OF MEDICAL PROGRESS.

[The abstracts and translations found under this title are made expressly for the  
AMERICAN MEDICAL MONTHLY.]

#### PHYSIOLOGY AND PATHOLOGY.

*On the Proportion of the Colorless to the Colored Blood-cells in the Healthy Condition.* By Dr. J. MOLESCHOTT.

THE proportion of the colorless to the colored blood-corpuscles, in the normal condition, has been stated by different authors as 1 : 8 or 1 : 10, but, recently, by Donolers and the author, it has been determined at 1 : 373. The author's present estimates are based upon calculations which were made upon seven individuals, at various epochs of life; and, with the exception of investigations with special reference to variety of nutrition, always an hour after dinner. The blood was always taken from the point of the little finger, and diluted with a saturated solution of Glauber salts. The field of vision was through hairs, which were fastened in the ocularium by means of a paper ring divided into six sectors. Each number given by the author forms the mean of calculations from seven different fields of vision. [We present only the mean of them, with the remark that the middle numbers do not materially differ from one another, and hope that the author's results, which well harmonize with the general views of the importance of the colorless blood-corpuscles, will find their conformation in more comprehensive calculations made according to the method of Vierordt and Welker.]

If we take the mean of all the calculations, we have for one colorless blood-corpuscle 357 colored; but taken singly—

In boys from $2\frac{1}{2}$ to 12 years,	226
In youths " 21 to 22 "	330
In men " 30 to 50 "	346
In old men " 60 to 80 "	381

In females from 14 to 38 years, out of the period of menstruation,	389
In the menstruating, . . . . .	247
In the same, not menstruating, . . . . .	405
In the pregnant, . . . . .	281

According to earlier experiments of Donolers and the author, the colorless blood-cells increase upon the ingestion of nutriment, and diminish upon fasting. The author confirmed anew this result. He examined the blood several times, in a part four hours after breakfast, part two hours after a meal

poor in albumen (consisting of potatoes, rice, and apples), and then after a richly albuminous meal of beef, beans, and bread. For each colorless blood-corpuscle there were,

4 hours after breakfast,	466 colored,
2 hours after a meal poor in albumen,	356 “
2 hours after a meal rich in albumen,	282 “

Hereupon the author lays down the following principles. With increasing age the colorless blood-corpuscles increase in proportion to the colored. The blood of the boy is the richest in colorless blood-cells. The differences between youths, adults, and the old, are but small; nevertheless, the decrease after the middle numbers is steadily progressive. The female sex, independent of the time of menstruation and pregnancy, for an equal number of colored blood-corpuscles, has less of the colorless than the male. At the time of pregnancy, and still more during menstruation, the number of colorless blood-corpuscles increases. Richly albuminous nutriment increases the relative quantity of the colorless cells of the blood much more considerably than food poor in albumen.—*Medicinische Wochenschrift* [Vienna], 1854.

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*On the occurrence of Pigment in the Blood.* By Dr. J. PLANER.

THE author has made use of the ample material of the Vienna dead-house, to direct his attention, after the example of Heschl and Meckel, to the appearance of black pigment in the blood, and the farther results of the same, as well as to the occurrence of sudden death. The pigment arises probably only as the result of previous intermittent fever, and often circulates long without producing any disadvantage at all, till, suddenly, from being retained in some portion of the capillary system, but especially in the brain, it calls forth local phenomena, in this case sopor, and generally symptoms which resemble typhus or cerebral disease. The pigment is black, more rarely yellow or brown, still more rarely red, and appears in the form of small, roundish granules, many of which are united, by means of a transparent, hyaline substance, disappearing in acids and alkalies, to corpuscles which possess frequently a roundish or oval, but often a very irregular shape, and whose size varies from  $0.003'''$  to  $0.012'''$ . In such a corpuscle are at times only two or three, but mostly a larger number of pigment-corpuscles inclosed. The author did not find a nucleus in them, and doubts in general their cell-nature. Another portion of the pigment appears in the form of flakes, reaching  $0.05'''$  in size, which exhibit the most various form, and at times have upon one side such a sharp, partly rectilinear, partly concave or convex boundary line, that they appear as if broken off. They are either upon all sides, or only on one or the other side, surrounded by a clear, transparent substance, or the pigment is present in the form of greater

or smaller granules, and united to a scale through the transparent substance. In two cases the author found in the blood from the right ventricle, well-formed hæmatoidine crystals in such a scale. The distribution of the pigment in the blood of the corpse is very different; the capillary vessels of certain organs are filled full of it, while others contain only a very small quantity. The author did not succeed in removing the color of the pigment by applying chlorine to a thin section of a liver filled with pigment.

In the blood of the heart and large vessels the pigment is tolerably equally distributed; the author could not convince himself of a special accumulation of the same in the blood of the portal and splenic veins. The largest quantity is constantly found in the spleen, so that this appears dark-brown, chocolate-like, frequently almost black, even in the cases where, in the liver and in the blood, only a very little pigment is to be found. The spleen is thereby sometimes considerably enlarged, softened; sometimes of normal size, or indeed smaller, more consistent, dry, blood-poor. The form and color of the pigment of the spleen accords with that of the blood. The proportion between black, brown, and yellow pigment was the same in the spleen as in the blood. The doctrine of the formation of the pigment in the spleen, the author considers not proven, since in the splenic vein and in the spleen, the quantity of the pigment appears to be no greater than in the liver and elsewhere. In the first place, there is no counter-evidence to show that the seat of the pigment-formation is not in the blood. The liver contains, in most cases, as considerable a quantity of pigment as the spleen, and has the like appearance; in particular cases, where the spleen is of a black color, little or no pigment exists in the liver. Some of the pigment of the liver exists in the vessels, whether all, cannot be said. The cells of the liver are simultaneously very rich in fat, and filled with brown, granular, bilious coloring matter, which, partly by its exterior appearance, partly by chemical reactions, is easily distinguished from the pigment in question. Next to the spleen and liver, the brain is most richly furnished with pigment, and the gray substance is thereby colored ashy gray. Here it is evidently contained in the vessels. The white substance contains less in its vessels, and exhibits no alteration of color. The previous morbid phenomena proclaim that the pigment had accumulated already during life in the vessels of the brain. The flakes are so large that they cannot possibly pass unbroken the fine cerebral capillaries, and they also serve as the first hindrance to the circulation. The author also observed several cases analogous to that described by Meckel, in which, at the same time, capillary apoplexies had been produced in the brain by the stasis of the pigment; larger hæmorrhages did not occur. In the kidneys, the pigment appears in smaller quantity, and especially in the Malpighian capsules and the capillaries of the cortical substance, still less in those of the pyramids.

The author also saw in the kidneys some of the smaller vessels filled with old coagula and slight hæmorrhages. In the vessels of the lungs the abundance of pigment varied very much, it was often considerable without the usual black pigment in the lungs having been displaced; in other cases there was only a very small quantity of it to be found. In the vessels of the remaining organs and tissues the pigment had never accumulated in any considerable quantity; there was observable, however, in many cases, a striking coloration of the skin, cellular tissue, mucous membranes, and lymphatic glands.—*Schmidt's Jahrbücher, June, 1854.*

*Bernard on the conditions under which certain substances, usually retained in the blood, pass into the urine.*

During active digestion, the blood of an animal contains a certain amount of sugar, which does not pass into the urine; but if the mass of blood be diminished by bleeding, the urine soon becomes saccharine. If we inject a limited quantity of saccharine matter into the blood of an animal ( $\frac{1}{2}$  gramme for a rabbit, fasting, of the weight of 2 kilogrammes), the urine will contain no trace of sugar; but if the animal be bled before being subjected to this experiment, a certain quantity of sugar will pass into the urine.

M. Bernard explains these phenomena by considering that the loss of blood renders the animal of less volume, reducing it to the condition of one of smaller size. It is known that small animals may be poisoned by doses easily borne by larger animals of the same species; and animals, after being bled, cannot withstand the same dose of a poison which they supported previously. These facts were formerly attributed to the increased absorption caused by the withdrawal of blood; but in the experiments above related, absorption had no part, as the substances were introduced directly into the circulation.—*Soc. de Biologie, 1853, in Monthly Jour. Med. Science.*

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#### PART IV.—HOSPITAL RECORDS.

[This department of the MONTHLY is under the charge of, and compiled and written by, Henry Melville, M. D.]

*Cholera.*—The leading feature in connection with this subject is the establishment and organization of the several hospitals for the reception and treatment of the disease in this city and in Brooklyn. The Commissioners of Emigration, in conjunction with the Board of Health, having appropriated the building occupied by the former as an office, in Franklin street,

the resident physician, Dr. Rockwell, was requested to supervise the necessary preparative arrangements for the reception of patients, and the following gentlemen were appointed as the medical staff: Dr. J. H. VANDERVEER, physician in chief, whose duty it is to be present during the day, to regulate the reception and treatment of the cases admitted, and to keep the needful records. Drs. J. H. Richards and C. H. Budd are the present assistant physicians, whose duty it is to be present alternately during the night and day, and to conduct the treatment of the sick.

Much opposition has been raised by the press to this establishment. In our view, this opposition has been somewhat ill-judged. There can be no doubt that it would be always preferable, in the establishment of institutions for the reception of disease, to place them as far out of sight as is consistent with the convenience and comfort of the citizens; but it must not be forgotten, that for the purposes of an epidemic of the speedy course and short duration which characterize cholera, due regard must also be had to the practical utility of the hospital. One point in this qualification being, its contiguity and accessibility to the infected localities. In this point of view Franklin street is very convenient to those streets from whence the larger proportion of cases is brought. Again, it is doubtful whether the Commissioners or the Board of Health could have obtained a building for the purpose if they had set to seek one, or at least they might have experienced much difficulty in doing so, and have encountered great delay, such is the prejudice of landlords against the using buildings for similar purposes, even in times of emergency. Having the building now used in possession, and it not requiring much, if any, alteration to make it serviceable, they were justified in at once acting as they have done; at least, we are confident that it will be found to have comported very effectually and seasonably with public safety and protection.

We do not mean to affirm that the locality, or the building, the mode of its arrangement, &c., are the best which could have been made, if the selection and preparation have been done leisurely before the disease had made its appearance, but as alternatives in an emergency they answer very well; at least the measure of success which has hitherto attended the treatment of those cases brought in, would seem to show no local disadvantages attending the selection of the building, nor have we heard that the disease has spread or been propagated in the street or neighborhood.

The total number of cases received at the Franklin street hospital up to the 27th ult. (the date at which this article went to press), was 300. Of this number, 155 have died; 118 have been reported discharged as cured; and there were 43 remaining. This is a very large proportion of cures. We have not any means, at present, of analyzing this return, but it is fair to presume that a considerable number of those reported as cured were either

such cases as were brought in early, and thus promptly submitted to treatment, or were really only aggravated cases of diarrhoea, with a choleraic tendency, such as are common during the epidemic of the graver malady. It will be interesting, at a future date, to discriminate between the ratio of recovery in cases wearing all the well-marked characters of Cholera Asiatica, especially when they have proceeded to collapse, and those which are merely of the description above alluded to. Such information we hope yet to be able to obtain through the politeness of the medical officers attached to the several institutions.\*

From what we have seen, and from all we have heard as the observation of others, the present epidemic is characterized by a marked absence of spasm of the extremities. The chief seats of spasmodic action, as evinced by the attendant pain, being the diaphragm and abdominal muscles, possibly, also, the coats of the intestines. Some cases have been accompanied by an eruption somewhat purpuric in its appearance. Dr. Vanderveer relates a fact worthy of note to all who have the charge of hospitals, or possess facilities for making postmortem examinations, viz., that in addition to a copious effusion within the cranium, *he has, in a considerable number of cases, observed a large amount of effusion within the spinal canal.* On tilting some bodies, after removing the contents of the cranium, *as much as from four to six ounces of fluid* have been observed to flow from this source. This fact is not without its value in the consideration of the pathology of the disease, and should be carefully looked to by all future investigators, as also the conditions of the substance and membranes of the spinal marrow and of the efferent nerves and connecting ganglia. The consecutive fever seems also to be quite as formidable and not more amenable to treatment than in former epidemics.

It is worthy of remark that a very large proportion of the deaths which have occurred, has been in those who had recently suffered from attacks of acute disease, or were laboring under chronic affections of some kind.

There still occur, within the wards of the several city hospitals, occasional cases of the disease. Among these we may more particularly allude to Dr. Dennis, the amiable and talented resident assistant in the obstetric department at Ward's Island. He was seized, in the first instance, with diarrhoea, which after a time assumed a dysenteric character, and from a

\* Another hospital has been established in Mott street, between Spring and Prince, a building formerly used as a Ward School. It possesses accommodation sufficient for about 150 patients. Dr. D. S. Conant, the Demonstrator of Anatomy at the New York Medical College, has been appointed Chief, with Drs. O'Reilly and Stiles as Assistants. It has not been in working order long enough to afford any statistics worthy of comment, but it will be a relief to the Franklin-street hospital.

great amelioration in all the symptoms, hopes were entertained that he would ultimately recover. Suddenly, however, there was a recurrence of large liquid evacuations, and he very rapidly sank. In his case there would appear to have been a strong predisposing cause from the great apprehension existing in his mind of an attack of the malady. He was a young physician of great promise, and his loss has been keenly felt by those who were brought in daily contact with him. He has fallen a martyr to the cause of medical science: a glorious example to the young aspirant for professional fame. It is only in the field of observation of disease that sound practical knowledge can be obtained, and he who steadfastly maintains the post of danger in pursuit of that great requisite, deserves encouragement and praise.

Accounts from various points of the union represent the disease to be very general and malignant. In Canada, especially at Montreal and Niagara, its ravages have been very fatal. Among its victims at Montreal is Dr. McCulloch, a highly respected and well known physician, who died after a few hours' illness. His death has cast a gloom over the community in which he resided, where his skill, zeal, moral worth, and social qualities will long be remembered.

*Ward's Island.*—At this institution a very interesting case of double popliteal aneurism was under treatment. Dr. Carnochan tied the right femoral, and the wound was progressing favorably, when the patient died from cholera. The postmortem examination verified the diagnosis, which had been somewhat obscured by indistinct pulsation and not well-marked bruit or thrill. The aneurisms were both true ones; that in the right leg being very large and filled with coagulum, that in the left being about the size of an egg.

There was also a case of very large mammary cancer, attended by disease of the axillary glands—the tumor had ulcerated and was discharging freely. The whole mass of disease was removed, and the parts are healing kindly. The operation was considered justifiable as a measure of present relief to the patient's sufferings; and where no immediate evil consequences take place the surgeon is fortunate who succeeds in this attempt. The respite granted to the patient can only be temporary under the best combination of circumstances; some surgeons, therefore, entertain grave doubts as to the propriety of operative interference in such cases; the best rule would appear to be, to follow the desire of the patient after having fully explained the nature of the disease, the risk of an operation, and the general result.

There still is a tendency to hospital gangrene in the surgical wards, and cholera makes itself seen in every portion of the Island.

**PART V.—EDITORIAL AND MISCELLANEOUS.**

JUSTICE TO PHYSICIANS.—In our May number we took occasion to express our sentiments pretty fully concerning a wide-spread slander on the medical profession. It is gratifying to know that those sentiments are fully endorsed by physicians, and that it meets with a kind reception from the best part of the community. In the hope that some encouragement may be found by others in well-doing in the following from *unprofessional* pens, we make these two quotations. Both are from the *Churchman*, published in this city. The first is from the pen of the editor, the Rev. H. N. Hudson, prefacing a quotation from our own article. The second is from a non-medical correspondent:—

“But our main interest in the paper draws to what the writer says touching the charge of materialism and scepticism brought against medical men. And here our observation and sympathy are entirely with the writer. Nor can we understand either the wisdom or the justice of making such charges. Sceptics and materialists, no doubt, there have been and are in the medical profession; and so there are, or something as bad, in the clerical; but the number of such is in proportion by no means so large as to furnish any just ground of reproach upon them as a class. If, in such cases, the faults of a few are to be thus visited on the whole, what profession can escape? Therefore, the thing is unjust. And it is equally unwise. For the medical profession have, and it cannot be taken from them, for they deserve it, very great influence. Whatever may be said of individuals among them, they are as a class known to have great solidity of judgment and rectitude of character. Their ministrations are needful to all, and sure to be sought by all; and the nature of their work cannot but give them great power over the opinions and sentiments of those to whom they minister. Is it wise, then, to think of drawing people to Christianity by representing the medical profession generally as not believing in it? So that, even if the thing were true, sound policy would pronounce it one of those truths that are to be spoken with a good deal of discretion and reserve. It is indeed but a scion of that old and most mischievous error which would still be seeking repugnances and making issues between revelation and science, as if the Word of God could be more authentic and sure than His Works.

“We have been thrown much, very much, into the company of medical men. And the experience we have had of them yields no sort of countenance to the charge thus brought against them. Our firm conviction is, that there is no class of men from whom there is more to be learned which the clergy ought to know, or less that it is wisdom to be ignorant of. Nor do we believe that any profession numbers, proportionably, more, or more intelligent and earnest, supporters of religion, of good morals, and sound learning, of every thing indeed that looks to the well-being of society. The church certainly reckons among them a great many of her most faithful and most useful members. It is in her sacred walks that we have been

most used to meeting with them ; and we have seldom failed, according to our poor capacity, to find them at once right-hearted, sound-minded, and free-handed in her cause. The numerous and pestilent quackeries that beset their profession, and the experience they are obliged to have of them, enables them, in a peculiar degree, rightly to understand and appreciate the no less numerous and pestilent quackeries that swarm in religion. On many accounts, indeed, they deserve well of the church and of the clergy. That, as a class, they are not easily humbugged, arms them with a strong title to confidence in a cause where, as it is not "of an age, but for all time," men are not apt to fix their interest or their pleasure in cheating or in being cheated. Moreover, we have private as well as public reasons for standing up for them in such measure as we can, and with such strength as we have. For we have ourselves known what it is to be poor and friendless, and to have some not ignoble aspirations which we were without the means of answering ; and in such cases there have always been some of them to stand by us : in other words, we have found too many generous benefactors among them to see them touched without feeling a little touched ourselves."

MR. EDITOR :

*Dear Sir:* Although not a physician, I read with no ordinary feelings of pleasure your vindication of the medical profession from the stale slanders which now and then come from those whose education and opportunity of observation ought to teach them better. That the study of the structure of man tends to make men materialists and infidels, is one of those maxims that men take for granted to be true, merely because of their antiquity, and because they have always heard them, and never stopped to examine into their truth. In times when all knowledge, except what came through the channel of the Church of Rome, was held to be heretical, it was to be expected that men who devoted their time and energies to studies out of the church should be looked upon with a jealous eye. But it is strange, now, when anatomy and physiology are incorporated in the studies of every highly-educated man, that any but the unlearned should repeat a long-refuted and exploded slander against a profession which ranks highest in human art, both as a scientific study and for its humane objects. It is not my purpose, however, to discuss this subject ; I merely wish to point to a remarkable illustration of the truth of a portion of your remarks, brought under my observation only a few days after reading them. I refer to the deplorable accident of the fourth of July on the Baltimore and Susquehanna Railroad. I wish, also, to make a suggestion which that horrible scene brought to my mind.

Immediately that it was known that there had been an accident, and that fellow-creatures were suffering and dying, the physicians within riding-distance were promptly on the spot, to render aid in preserving life and alleviating pain, by setting limbs, dressing wounds, and superintending the removal of the wounded. This was not, as they might say who speak slightly of those whose aid they are most clamorous for in their own sufferings, for the sake of a fee ; for the work—on the sultriest of days and at a distance from water—work long-continued and of the most laborious kind, was performed for persons utterly unknown to them, whose names they did not even stop to inquire, and whom they never expected to see or

hear of again. Moreover, when it was suggested, afterwards, that the railroad company could be made to pay them for their services at the place of the disaster, the suggestion was not, at least by those whom I have seen, for a moment entertained. They declined to seek pay for services prompted only by feelings of humanity.

My visit to the ground was not to gratify an idle curiosity or to moralize, but while engaged in assisting the dying and wounded or in removing the dead, I could not but think how acceptable would be the services of the physicians of the soul—the labors of those who profess to be engaged only in a work of love and for the sake of love. I am far from wishing to make any comparison between the medical and the clerical professions, but might it not as naturally occur to the clergy, that in the agony of *mind* which such an accident occasions, there is need of men to *talk* kindly, as well as to *act* kindly,—for which the actors have no time,—to sympathize, to soothe, to direct the thoughts of the wounded heavenward, before the supervening fever shall send them delirious to meet their God.

There are more clergy of the different denominations (though none of the church) in the neighborhood than there are physicians; and had they been as prompt to lend their aid, I know that their services would have been as acceptable. I speak from actual knowledge; for I could not refrain from occasionally ceasing from my labor to sit by a sufferer and converse with him, and I had ample evidence of the thankfulness with which my efforts were received; especially on the part of one poor man, whose moments of consciousness were none too many to prepare for the change that three days brought upon him.

The suggestion, then, that I wish to make—to which I am prompted by the advice of a clergyman, a near friend, a pious and a practical man, is, that the clergy be as prompt to repair to the scenes of disaster as the physician. Actual observation convinces me that there is nothing impracticable or visionary in the suggestion; and it cannot but increase respect for the profession, when the world sees the self-denial and manifest disinterested exertions of its members.

H. O.

*Baltimore County, July, 1854.*

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SODA WATER.—At the request of several apothecaries, and others interested in the preparation and sale of soda water, I have visited some establishments where the copper fountains are made and tinned, for the purpose of suggesting modifications which might prevent poisonous impregnation.

That some investigations are requisite, may be judged from the fact that one copper-smith acknowledged it was his custom to facilitate the flow of the tin by the use of soft-solder (an alloy of tin and lead), and, in consequence of its cheapness, he made the coating thick, thus exposing a large surface of lead to the corrosive action of the acid water. He obligingly opened an old fountain, the inspection of which verified the truth of his assertion; for the soft solder was abundant. He expressed his belief that this was a common practice. Many, therefore, who deem their fountains

reliable, because recently tinned (?), will find themselves grossly deceived, unless they are sure that the purest block tin has been employed.

E. Knox, a copper-smith in Fulton-street, I found, coated the copper vessels thoroughly, and with the purest block tin. (I mention his name, because to his careful and conscientious workmanship many owe a debt of thanks for the preservation of their health.) He informed me that fountains were often used four or five years without being re-coated; some he knew had not been tinned for eight or ten years! so great the carelessness, that the tin, at times, is found entirely removed from the bottom of these vessels. The mechanical action exerted by the liquid as it is introduced through a tin or tinned pipe, and has its momentum checked at this point, together with the blows which the bottom of the heavy vessel must occasionally receive, aid the chemical action of the acid liquid in removing the protecting coat. Hence, it is the custom to tin this portion of the fountain more thickly.

Without discussing this subject too elaborately, I would sum up the results of these examinations by suggesting, in the first place, a modification in the form or shape of the copper fountains. All these vessels should be so constructed that they may be readily opened for inspection—not, as at present, requiring to be unsoldered. The methods now employed for determining their fitness for use, are by chemically testing the soda water, or examining by the sense of taste. Most commonly, as the first indication of the removal of the tin, customers complain of the coppery flavor.

Both of these methods are untrustworthy; for even though we grant that those vending the soda water are competent to test for its impurities (which, in the case of confectioners and others, is not probable), yet after a fountain has been examined, and pronounced to contain a pure liquid, by standing several hours or several days (for during a spell of cool or rainy weather this may occur in any establishment), a poisonous contamination may take place. On the acuteness of our sense of taste we must not place great reliance, since the metallic flavor may be disguised by the syrups. Furthermore, the copper only can be recognized by this sense; the lead would escape detection.

Again, it by no means follows that because one is not seized with vomiting, cramps, &c., that he is uninjured, for small doses oft-repeated, may prove deleterious. This is especially true with regard to lead, as will be seen in the accompanying letter. Although it may reasonably be conjectured that a recently tinned vessel may last through a single season, yet as the coating is occasionally porous in certain parts, the copper may be exposed to and corroded by the action of the carbonic acid, so that even after the introduction of a few charges the vessel may be unfitted for use,—another argument for the construction of the copper fountains in a way that they may be examined with facility.

2ndly. No lead, or alloy of lead, should be employed in any part of the soda apparatus with which the carbonated water is brought in contact, not even to attach the tin or copper-tinned pipe (which is introduced within the receiver) to the stopcock—a common practice; this soldered part is often found corroded. Of course, no lead pipe should be used, be it ever so short. As an illustration of this point, I here introduce the following interesting letter, for which I am much indebted to the author:

228 EIGHTH AVENUE, JULY 7TH, 1854.

SIR—Having seen a paper written by you in the "*American Medical Monthly*," on the "Poisonous Effects of Soda Water from Copper Fountains and Lead Pipes," I beg leave to cite my own case as an entire corroboration of your analysis.

Last summer I owned a drug store situated on the corner of 16th street and 3rd avenue; I kept soda water for sale, which I procured from — (one of the best manufacturers of this beverage in New York). The fountains were placed in the basement, and communicated with the store by means of a long leaden pipe. I used frequently to notice that parties upon drinking the soda water would be attacked with sudden vomiting, pain in the epigastric region, &c. It did not strike me at the time that it was owing to any poisonous substance impregnating the liquid; but I rather ascribed it to the presence of flatulence in the *primæ viæ*. During the excessively hot weather I indulged pretty freely myself in the beverage. It is true, after drinking a glass, I was frequently attacked with vomiting, but I did not pay much attention to the fact, believing it originated from the cause mentioned above. After drinking daily a considerable quantity of the beverage for three weeks, I was attacked with *Colica Pictorum*, as pure a case as ever I had the lot to see. I was full ten days before I recovered from it, and it left me excessively weak. I was satisfied after this attack, that the soda water was impregnated with lead; I tested it, and found such to be the case. I immediately declined selling any more.

You are at liberty to make what use you please of this communication.

I am, sir, yours respectfully,

JOHN B. WILLIAMS, M. D.

3dly. All the stopcocks should be silvered or tinned internally, the brass or composition ones as now used, are often stained with verdigris.

4thly. Care should be taken to avoid the use of any composition of copper or of lead in the construction of the *exit pipe*; for this being exposed alternately to the action of the air and of the soda water, the oxygen of the one and the carbonic acid of the other would ensure a speedy corrosion. They should therefore be carefully silvered.

5thly. All the carbonic acid gas should be thoroughly washed by bubbling it through water before it enters the condensers, to free it from any impurities in the shape of spray which might pass over from the generator.

But why should we be deprived of this refreshing drink? Why should we not have this sparkling beverage uncontaminated? than which, when pure, there is none more palatable and popular during the summer season. That it is possible, I refer to some facts presented in a letter from a gentleman in Boston; he says, "Burnett's stone fountains are of earthenware, made in the usual form, covered externally with copper and circlets of iron to secure strength. A block tin pipe leads from the fountain to a tank where it is coiled in a worm-like manner and covered with ice; thence to the counter where it terminates in a silver mouth-piece or exit pipe." How strikingly this contrasts with the carelessly tinned or soft-soldered copper fountains, with their brass stopcocks and long coils of lead pipes for coolers!

As far as the pecuniary interests of many are concerned, I regret that calling the attention of the public to this subject should have been in the slightest degree prejudicial. Yet, if it shall tend to the securing of a pure, wholesome, and refreshing draught in lieu of an injurious or poisonous one, the more insidious because of its unsuspected character, I feel assured that no honest persons would be disposed to censure, even if it proved to them a temporary loss, and least of all, those who make it the business of their lives to aid the physician by the dispensing of pure medicaments for the relief of suffering humanity.

R. OGDEN DOREMUS, M. D.

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[The following note was received too late for insertion in the last number of the MONTHLY.]

June 20th, 1854.

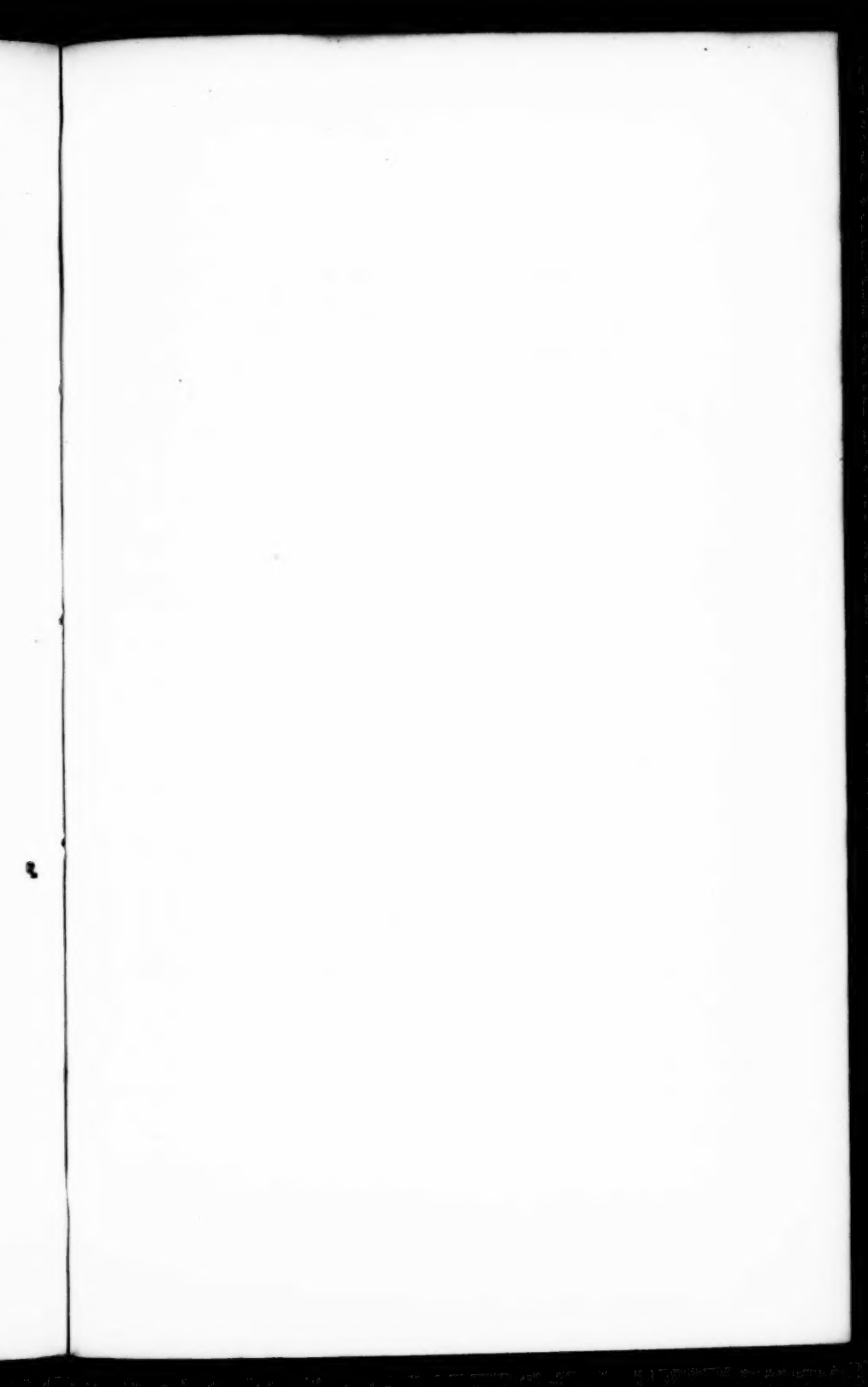
Mr. EDITOR:—

Some of your readers may remember that in the case of *Lorenzo Slack vs. Dizi Crosby*—the same being a prosecution for alleged malpractice in treating a fractured os femoris for the plaintiff—the jury gave a verdict for the plaintiff, and mulcted Prof. Crosby to the amount of \$800 damages.

I am happy to say that this case has been recently reviewed at Woodstock, Vt., and the *previous decision has been reversed*.

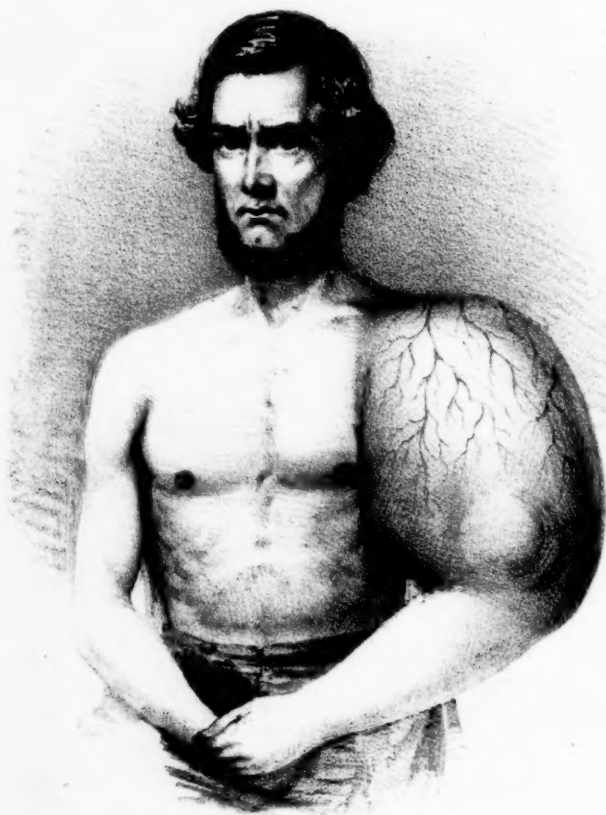
It is a just cause of congratulation on the part of the profession throughout New England, that at last, though so late, justice has been rendered to Prof. Crosby. I am informed that not less than *forty suits for malpractice* would at once have been commenced in the State of Vermont, had the decision made a year ago been confirmed.

Yours truly,  
E. R. P.



DR CARNOCHAN'S CASE OF AMPUTATION AT THE  
SHOULDER JOINT.

NO 1.



DRAWN FROM LIFE BY JAS. FLORACET

ETCHED BY SIMON D. O. N. Y.

APPEARANCE OF THE TUMOR OF THE HUMERUS BEFORE THE OPERATION.

APPEARANCE OF THE PATIENT THREE MONTHS  
AFTER THE OPERATION.

Nº 2.



FROM A DAGESTEROTYPE BY WOOD

LITH. BY SARONY & CO. N.Y.

ON THE SURFACE OF THE STUMP, THE LINE OF CICATRIZATION IS SEEN .